

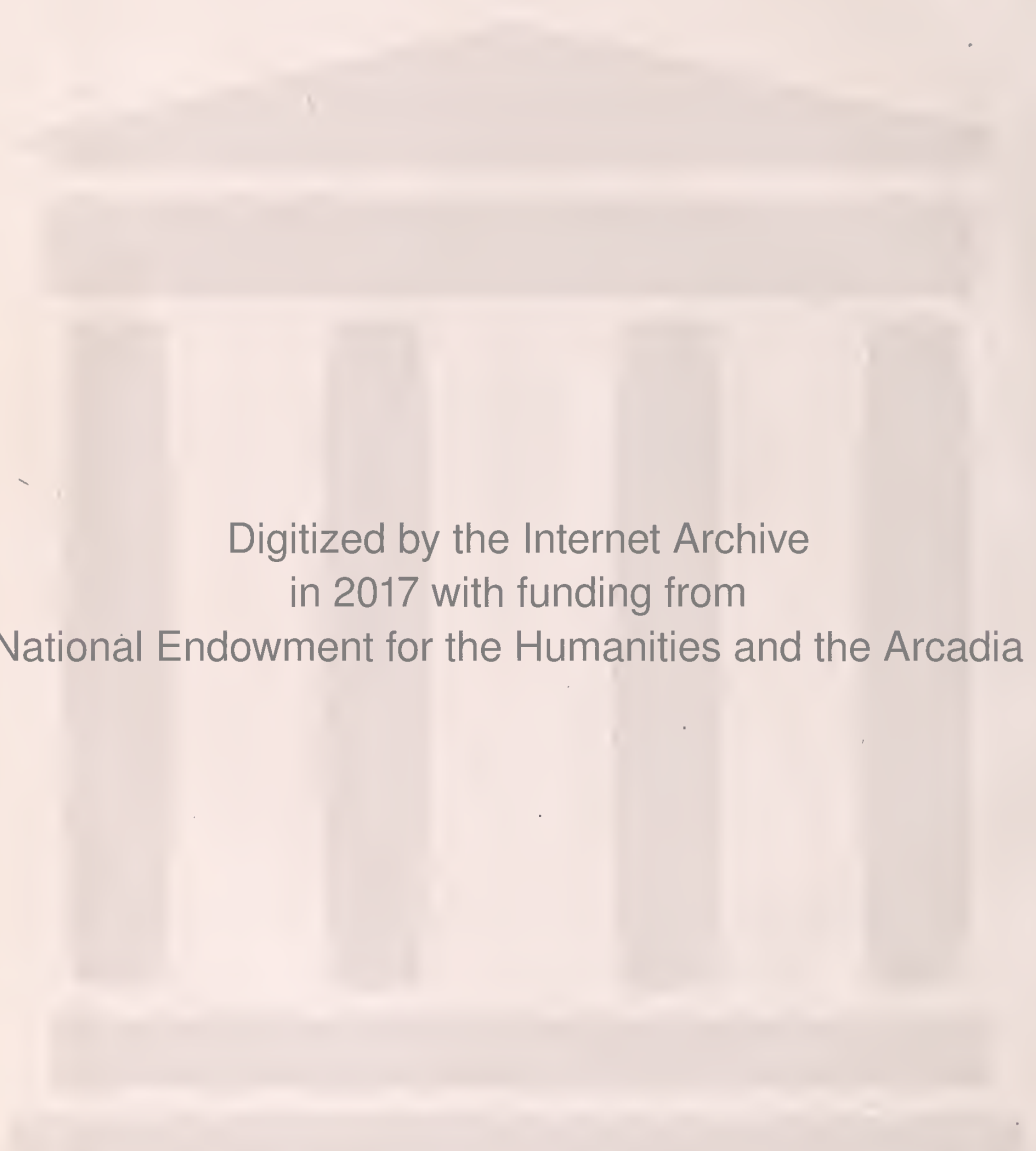
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Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION



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JANUARY, 1971

VOLUME 68, NUMBER 1

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113th MSMA Annual Session
April 15-18, St. Louis

Menrium® treats
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most.



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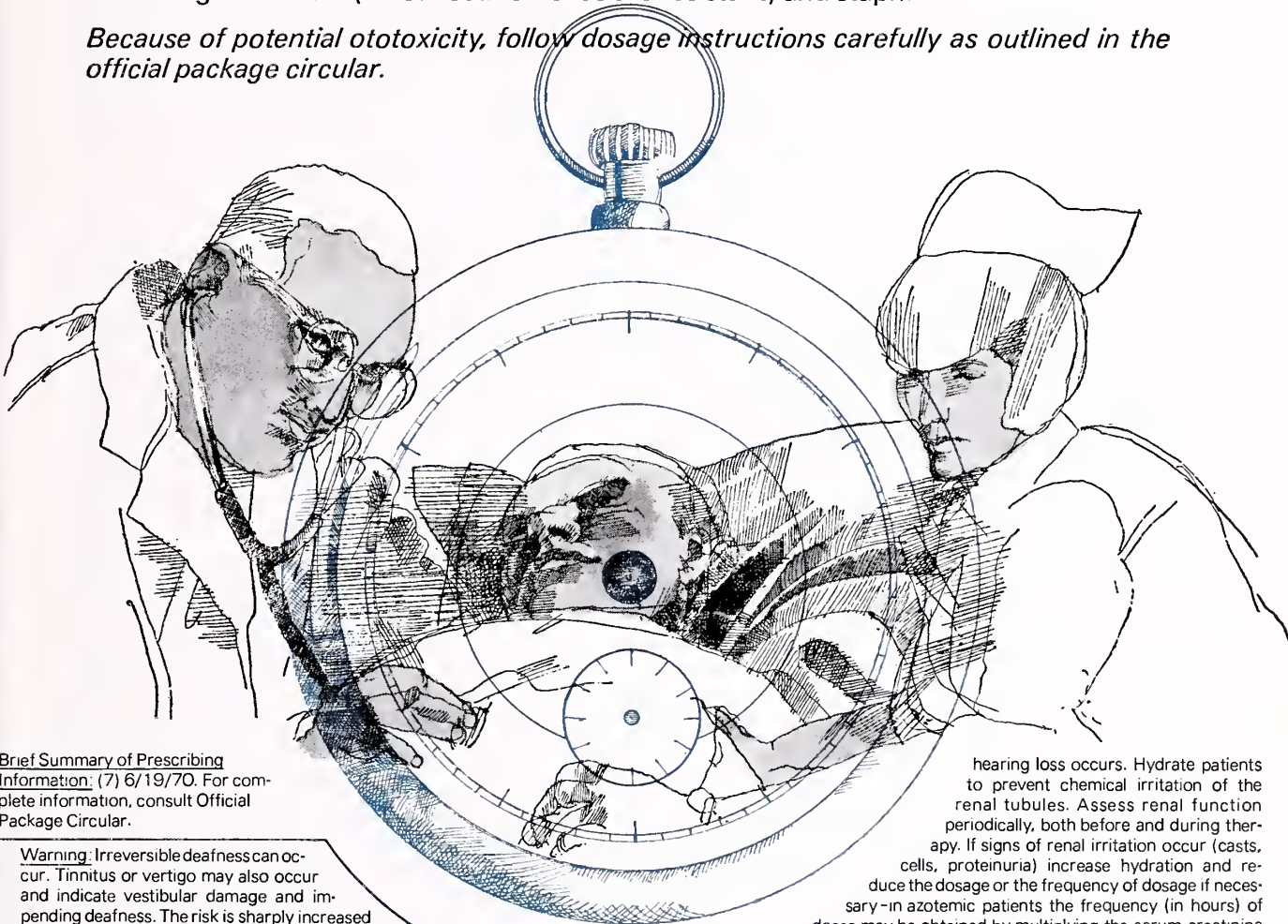
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Adverse Reactions: Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias.

Dosage and Administration: The maximum total daily dose should not exceed 1.5 Gm. by all routes of administration. The usual dose is 7.5 mg./Kg./12 hours I.M. The average adult dose is 1 Gm. daily. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.

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AMA House of Delegates Reaffirms Policy on Abortion at Clinical Meet in Boston

The American Medical Association House of Delegates, meeting in Clinical Session on November 29 to December 2 in Boston, reaffirmed the decision of the House in June concerning abortions and created a new class of membership which gives interns and residents a direct voice in proceedings of the AMA.

The Missouri State Medical Association was represented by its four delegates and four alternates along with Association officers and members. Delegates are Arthur W. Neilson, St. Louis; Hector W. Benoit, Jr., Kansas City; J. Loren Washburn, Versailles; and Stanley Peterson, Springfield. Alternates are James C. Sisk, St. Louis County; Rae W. Froelich, Lebanon; Robert W. Kelley, St. Louis; and Hugh Stephenson, Columbia. Doctor Washburn served as a member of Reference Committee H. In addition, Radiologist Wendell Scott of St. Louis was the delegate for his section.

Officers of MSMA in attendance included President Joseph L. Fisher of St. Joseph and Treasurer Max Franklin of St. Louis.

Concerning the issue of abortion, delegates rejected attempts to change the policy statement adopted at the 1970 annual convention and, after brief discussion, reaffirmed that policy which is:

Resolved, That abortion is a medical procedure and should be performed only by a duly licensed physician and surgeon in an accredited hospital acting only in conformance with standards of good medical practice and after consultation with two other physicians chosen because of their professional competence, and be it further

Resolved, That no physician or other professional shall be compelled to perform any act which violates his good medical judgment. Neither physician, hospital nor hospital personnel shall be required to perform any act violative of personally held moral principles. In these circumstances, good medical practice requires only that the physician or other professional personnel withdraw from the case so long as the withdrawal is consistent with good medical practice.

The House created a new class of memberships for interns and residents. The action, recommended by the Board of Trustees, will allow such members to elect a delegate and alternate to the House. Dues will be \$20 annually and the new members must convert to active or service

membership upon completion of their training programs. The House also approved revision of the Bylaws to provide for a direct membership category, with payment of AMA membership dues by doctors in the Veterans Administration, non-uniformed physicians of the Public Health Service and other fulltime civilian physicians employed by federal agencies not eligible for component society membership.

The House reaffirmed its approval of Peer Review Organizations, as contained in the AMA Medcredit program, and urged that "all components of organized medicine give energetic support to furthering the effective implementation of peer review."

This action came almost simultaneously with Senate Finance Committee modifications of several provisions in the Social Security Bill regarding professional standards review organizations (PSRO). The AMA had objected to the provisions, among which were: Preadmission approval requirements, national norms of care, federal ownership of PSRO files, a \$5,000 fine for violations and review of all services provided.

The Senate Committee announced that it had deleted the requirement of federal ownership of files; deleted the \$5,000 fine but retained provisions for refunds of fees; eliminated national norms but retained provisions for regional norms; and eliminated the necessity of preadmission approval for all elective procedures, but allowing the PSRO to specify those situations where preadmission would be required.

The Committee report also was to specify that the PSRO could not be a medical society, but could be organized and set up by a medical society such as a Foundation. The bill provides that no PSRO shall utilize a non-physician to make final determinations regarding professional conduct of any physician or any act performed by a physician in the exercise of his profession. The House directed the Board of Trustees to continue to seek appropriate changes in the bill.

"The age-old professional idea of medical service to all, whether able to pay or not," affirmed by the House in 1934, was emphatically reaffirmed by delegates in Boston. They acted on

a recommendation by the Judicial Council, which said it had received "many letters complaining of an apparent preoccupation by an increasing number of physicians with the financial aspects of their medical practice."

Ideally, the physician should be paid promptly, the Council said. It added, however, that if he is not paid as promptly as other creditors, "he should recall that he is a professional man with all the perquisites that term implies." It criticized such "real examples" as adding 1.5% interest per month to the bill of a patient on a small pension and refusing to see a patient because the patient's balance was too high. "The Council believes these examples are the exception. . . . Nonetheless (they) reflect adversely on the whole profession and especially on the countless physicians who extend credit willingly or write off old accounts because they are dedicated to serving mankind." The House not only adopted the report, it urged wide dissemination of it to component and constituent medical societies.

The terms "ancillary" and "paramedical" will no longer be used in AMA statements, but will be replaced by the term "allied," the House decreed. It also approved a Board of Trustees report dealing with the licensure of health occupations. Recommendations in that report include the following: state legislatures be urged to amend state medical practice acts to remove any barriers to increased delegation of tasks to allied personnel by physicians; that alternative routes to licensure, such as job performance tests, be studied; that programs for periodically updating knowledge and skills of currently licensed or certified occupations be encouraged; and that the House of Delegates call for a nationwide moratorium on licensure of any additional health occupations. Consideration is to be given to forming a national "task force" to study the licensure problem in detail.

The House defeated measures seeking to change the manner of electing members of the Board of Trustees. The measure would have had trustees elected at large or on a regional basis.

Dr. Walter C. Bornemeier, AMA President, in his opening remarks at the Clinical Session said that the American Medical Association

must "take a leadership role" in development of neighborhood medical clinics, which are fast becoming "the focal point by delivery of most medical services."

"As the government takes on an increasing role in health care, as costs continue to rise, as local and state governments are confronted with increasing demands on limited public funds, as groups such as organized labor continue to push for nationalized health services, we can expect federal legislation to zero in on neighborhood medical clinics," Dr. Bornemeier said. AMA leadership is thus vital "so that we may insure that medical clinics remain a part of private practice," he said.

Dr. Bornemeier's proposals include the following:

Creation of a program to assist physicians in setting up adequate health facilities for group or solo practice. A number of services would be covered. Dr. Bornemeier said that he seeks means "whereby young physicians can be well advised and local medical societies will be involved in organizing and maintaining control of medical clinics. I believe that if we just leave it up to each medical community to act in its own way, medicine will default to hospitals, to government and to social service agencies who now vie for control of the mechanisms which deliver medical care. The young doctor going into practice must be able to see that AMA is here to help."

As the concept of charity medicine fades while insurance plans grow, inducements to doctors to establish private practice groups in the ghettos should be considered, such as low cost federal loans or Hill-Burton type grants.

The AMA should conduct a periodic survey of manpower needs in each specialty across the country. Results of the survey would go to each senior medical student showing how many general surgeons, internists, etc. are now available and how many are needed.

Dr. Bornemeier repeated suggestions he made upon inauguration last June that medical education be shortened to six years, that the method of training specialists be reviewed to emphasize ambulatory patient care rather than in-hospital care and that new MD's train at the side of experienced physicians in preceptorship programs.

Have You Made Your Reservations?

MSMA 113TH ANNUAL SESSION

April 15-18

St. Louis

Preliminary Program
113th Annual Session

MISSOURI STATE MEDICAL ASSOCIATION

Chase-Park Plaza Hotel, St. Louis

April 15-18, 1971

Thursday, April 15

- 11:00 AM Registration of Delegates.
- 1:30 PM House of Delegates Meeting, opening session.
- 4:30 PM Reference Committee Meetings.

Friday, April 16

- 8:00 AM Registration.
- 9:00 AM *Medicare-Medicaid, Why the High Cost?* (Panel Participants and Moderator to be announced.)
- 10:30 AM Intermission to view exhibits.
- 11:00 AM Continuation of *Medicare-Medicaid Program*.
- 11:00 AM *Parkinson's Disease* (Sponsored by St. Louis Society of Neurological Sciences.)
Panel Participants:
The Effects of L-Dopa on Parkinson's Disease, George H. Klinkerfuss, M.D., St. Louis.
Surgical Aspects of Parkinson's Disease, Claude Bertrand, M.D., Montreal, Canada.
- 12:00 Noon MSMA Maternal Welfare Luncheon (Sponsored by the Missouri Obstetrical and Gynecological Society.)
University of Missouri Alumni Luncheon.
- 2:00 PM *Drinking, Drugs, Dropping Out and Dissent* (Sponsored by the Missouri Academy of Psychiatry.)
Moderator: David Davis, M.D., Columbia, President, Missouri Academy of Psychiatry.
Biological and Behavioral Aspects of Alcoholism, Jack H. Mendelson, M.D., Boston, Mass.
Panel Participants:
R. Raymond Knowles, M.D., St. Louis.
Donald W. Goodwin, M.D., St. Louis.
- 2:00 PM *Organization for Emergency Department Care*.
Moderator: Oscar P. Hampton, Jr., M.D., St. Louis, Assistant Director, Trauma Activities, American College of Surgeons.
Panel Participants:
J. Cuthbert Owens, M.D., Denver, Colo.
Louis P. Hetlage, M.D., Troy.
- 2:45 PM *Induction of Ovulation*, James C. Warren, M.D., Kansas City, Kan. (Sponsored by Missouri Obstetrical and Gynecological Society.)
- 3:30 PM Intermission to View Exhibits.
- 4:00 PM House of Delegates, second session.
- 5:30 PM Missouri State Medical Foundation Annual Meeting.
- 6:00 PM Reference Committees.

Saturday, April 17

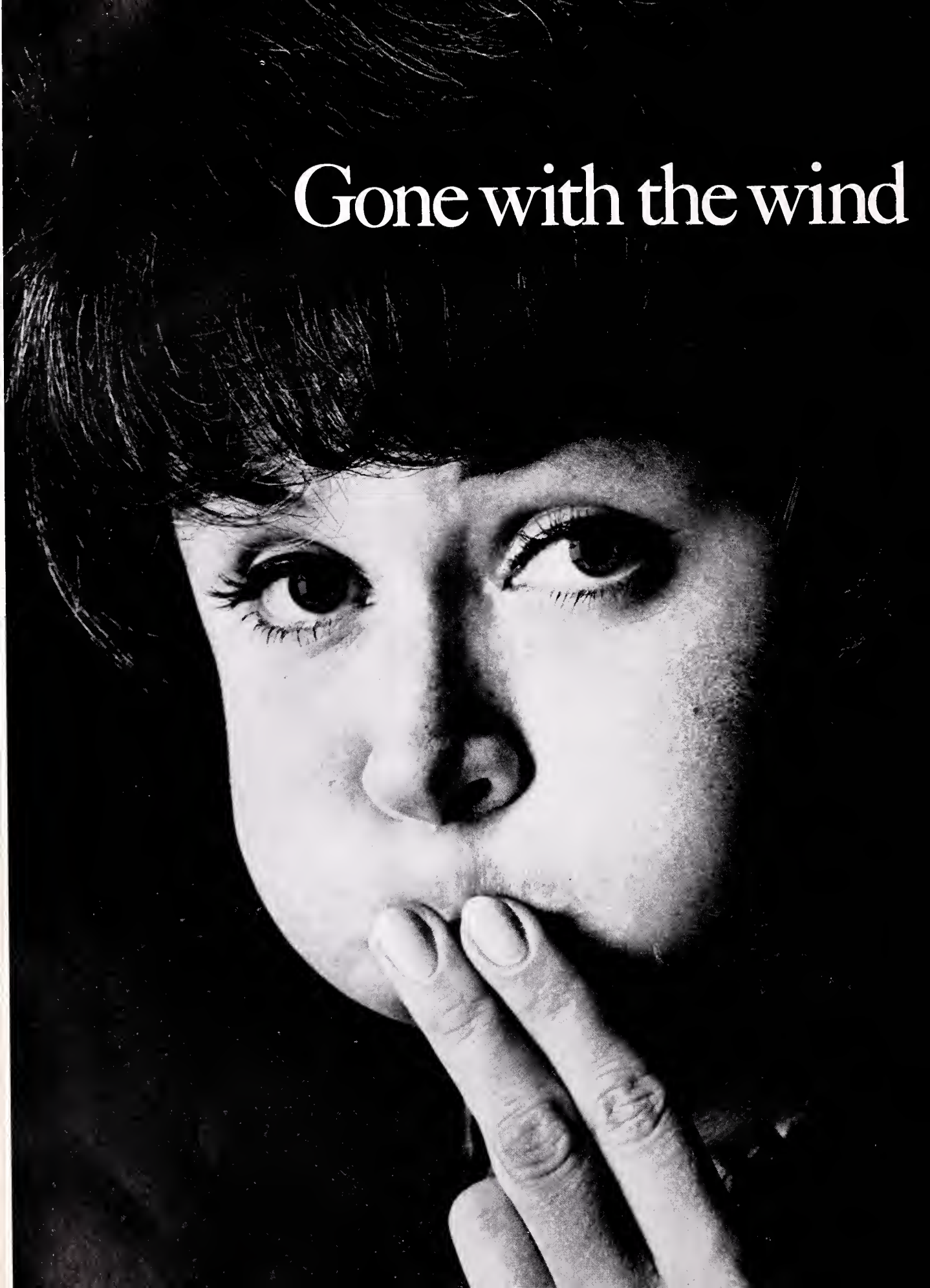
- 8:00 AM Registration.
- 9:00 AM Program on Sex.
(Panel Participants and Moderator to be announced.)
- 9:00 AM *Symposium on Coronary Artery Disease* (Jointly sponsored by Missouri State Surgical Society and Missouri Heart Association.)
Moderator: Brent M. Parker, M.D., President, Missouri Heart Association.
Panel Participants:
Indications for Coronary Arteriography, J. Gerard Mudd, M.D., St. Louis.
Medical Therapy for Angina Pectoris, Gerald A. Wolff, M.D., St. Louis.
Surgical Therapy—Coronary Artery By-Pass Grafts, George C. Kaiser, M.D., St. Louis.

- Carotid Sinus Nerve Stimulator Implantation*, Arthur E. Baue, M.D., St. Louis.
- 10:30 AM Intermission to View Exhibits.
- 11:00 AM Panel on *X-Ray Negative Upper GI Bleeding*.
Moderator: Edward D. Kinsella, M.D., St. Louis.
Panel Participants:
The Role of the Surgeon, Walter F. Ballinger, M.D., St. Louis. (Sponsored by the Missouri State Surgical Society.)
The Diagnosis of Upper Gastrointestinal Bleedings by Angiography, P. Ruben Koehler, M.D., Salt Lake City, Utah. (Sponsored by Missouri Radiological Society.)
Contribution of Endoscopy to the Diagnosis of Upper Gastrointestinal Bleeding, John F. Morrissey, M.D., Madison, Wisc. (Sponsored by Missouri Society of Internal Medicine.)
- 11:00 AM Program on *Ophthalmology*, H. Saul Sugar, M.D., Detroit, Mich. (Sponsored by Missouri Ophthalmological Society, Inc.)
Moderator: Robert C. Drews, M.D., Clayton.
- 11:45 AM Panel on *Otolaryngology*.
Moderator: Joseph H. Ogura, M.D., St. Louis.
Panel Participants:
The External Ear-1971, Donald G. Sessions, M.D., St. Louis.
Cervical Maxillofacial Trauma, Mark May, M.D., St. Louis.
Highlights in Treatment of Head and Neck Cancers, Joseph H. Ogura, M.D., St. Louis.
- 12:30 PM General Luncheon.
Fifty-Year Club Luncheon.
Missouri Ophthalmological Society Luncheon.
- 2:30 PM *Different Systems for Delivery of Health Care*.
Moderator: George H. Ladyman, M.D., Poplar Bluff.
Panel Participants:
National Health Insurance, Mr. Robert J. Myers, Silver Spring, Maryland.
Group Practice, Edward M. Wurzel, M.D., Executive Director, American Association of Medical Clinics, Alexandria, Va.
Prepaid Plans, C. C. Cutting, M.D., Executive Director, The Permanente Medical Group, Oakland, Calif.
- 2:30 PM Program on *Immunology* (Sponsored by Missouri Chapter, American Academy of Pediatrics.)
Moderator: Francis X. Lieb, M.D., St. Louis.
Panel Participants:
James D. Cherry, M.D., St. Louis.
(Second Participant to be selected.)
- 3:15 PM *Immunosuppressive Drug Therapy in Connective Tissue Diseases*, William E. Reynolds, M.D., Medical Director, The Arthritis Foundation, New York, N. Y.
Moderator: Robert H. Ramsey, M.D., Florissant.
Panel Participants:
Lester E. Wolcott, M.D., Columbia.
Jack Zuckner, M.D., St. Louis.
Sherwyn J. Wayne, M.D., St. Louis.
(Sponsored by the St. Louis Rheumatism Society.)
- 4:00 PM Intermission to View Exhibits.
- 6:30 PM Social Hour for those attending the Banquet.
- 7:15 PM Annual Banquet in Honor of Past Presidents of MSMA.
Guest Speaker, Russell B. Roth, M.D., Erie, Pa., Speaker of the House of Delegates, American Medical Association.

Sunday, April 18

- 7:30 AM House of Delegates Meeting, breakfast and final session.

Gone with the wind



Officer's Conference January 30-31

Fourth Annual Event Set In Jefferson City

Arrangements have been completed for the Fourth Annual County Society Officer's Conference of the Missouri State Medical Association to be held Saturday afternoon and Sunday morning, January 30 and 31, 1971 at the Ramada Inn in Jefferson City.

The program was arranged by a sub-committee of the Commission on Public Affairs. Dr. Richard Bowles of Liberty was chairman of the sub-committee.

Among highlights of the program will be a panel of newspaper representatives on the Saturday afternoon program and a look at the legislative situation in both Jefferson City and Washington on Sunday morning.

A banquet on Saturday night will feature Dr. Richard Wilbur, Deputy Executive Vice President of the American Medical Association.

Special invitations and programs are being mailed to the officers of all county societies in Missouri.

All members of the Missouri State Medical Association are invited to attend the Officer's Conference. Pre-registration is requested.

A complete program as well as a pre-registration blank are printed on the back of this page for the convenience of those who desire to attend.

MSMA
News

Two-Day Scientific Program Will Highlight The 113th Annual Session

An outstanding scientific program on Friday, April 16 and Saturday, April 17, 1971 will highlight the 113th Annual Session of the Missouri State Medical Association at the Chase-Park Plaza Hotel in St. Louis. The Annual Session opens with a 1:30 p.m. House of Delegates meeting on Thursday, April 15 and closes with a Sunday morning meeting of the House on April 18.

As in the past, a number of organizations and specialty societies will sponsor specific portions of the program. Also, a number of special events will be held during the four-day meeting. The Woman's Auxiliary to MSMA will hold its meeting in conjunction with the Annual Session.

Among organizations scheduled to sponsor programs during the 113th Annual Session's scientific section include St. Louis

Society of Neurological Sciences, Missouri Obstetrical and Gynecological Society, Missouri Academy of Psychiatry, Missouri State Surgical Society, Missouri Heart Association, Missouri Society of Internal Medicine, Missouri Radiological Society, Missouri Ophthalmological Society, Missouri Chapter of the American Academy of Pediatrics, and St. Louis Rheumatism Society.

There will be no general luncheon on Friday this year, but the University of Missouri Alumni Association will sponsor a luncheon and there will be a Maternal Welfare Luncheon. A general luncheon is scheduled on Saturday along with luncheons for members of the Fifty Year Club and Missouri Ophthalmological Society.

The program for the 113th Annual Session is being planned by a special committee of the Commission on Continuing Education and Health Manpower. Edward D. Kinsella, M.D., St. Louis, is chairman of the committee. John F. McDonnell, Kansas City, is chairman of the Commission.

New Member Orientation Is Scheduled For April 15

A new member orientation session for the Missouri State Medical Association has been scheduled for Thursday morning, April 15, 1971 at the Chase-Park Plaza Hotel in St. Louis. The session will run from 8:30 a.m. until 12:15 p.m.

The first orientation session is being held as a part of the 113th Annual meeting of the Missouri State Medical Association. The Association's House of Delegates will meet at 1:30 p.m. the same day.

Arrangements for the program are being made under the direction of the MSMA Commission on Public Affairs by a special committee chaired by Dr. Troy Morgan of Albany.

A resolution calling for orientation of new members was approved by the MSMA House of Delegates meeting in April of 1970.

Sixth Councilor District Meeting On January 13th

The Sixth Councilor District meeting of the Missouri State Medical Association is scheduled for Wednesday night, January 13, 1971 at the Holiday Inn in Warrensburg.

Guest speakers on the program include MSMA President Dr. Joseph L. Fisher and Health Care Foundation of Missouri Chairman Dr. Hector W. Benoit, Jr. Dr. Fisher will discuss activities of the Association and Dr. Benoit will speak on the subject of peer review.

Dr. William Bradshaw of Clinton is Councilor for the Sixth District.

A special mailing has been sent to all physicians in the Sixth District.

OFFICER'S CONFERENCE PROGRAM

SATURDAY, JANUARY 30, 1971

- 1:30 p.m. - Your State Association
Joseph L. Fisher, M.D.
President, MSMA
- 1:50 p.m. - The American Medical Association
Arthur W. Neilson, M.D.
Delegate to the American Medical Association
- 2:10 p.m. - The County Society and Grass Roots Medicine
Richard Bowles, M.D.
President, Clay County Medical Society
- 2:30 p.m. - An Intern Gives His Views on Medicine
Roger Greenlaw, M.D.
Intern at University of Missouri Medical Center, Columbia
- 3:00 p.m. - Coffee break
- 3:15 p.m. - Panel -
Improving Relations with the Press
Jac Zimmerman, co-publisher, Herald-Free Press, Bolivar, Mo.; Miss Sue Ann Wood, reporter, Globe-Democrat, St. Louis; Donald Stimble, publisher, Sun Gazette, Fulton, Mo.
- 6:15 p.m. - Cocktail party
- 7:00 p.m. - Banquet
Address by -
Richard Wilbur, M.D.
Deputy Executive Vice President American Medical Association

SUNDAY, JANUARY 31, 1971

- 8:30 a.m. - The Legislative Outlook

In Jefferson City -
John I. Matthews, M.D.
Chairman, MSMA Legislative Affairs Committee
- In Washington -
James Foristel
Director, AMA Congressional Relations Department
- 9:30 a.m. - Brainstorming Session
Discussion groups with leaders
- 10:45 a.m. - Coffee break
- 11:00 a.m. - Orientation Session

Medical Society Presidents -
Gerald L. Miller, M.D.
MSMA President-elect
- Medical Society Secretaries -
Mr. Raymond McIntyre
MSMA Executive Secretary
- Other Conference Participants -
Richard Wilbur, M.D.
AMA Deputy Executive Vice President
- 11:30 a.m. - Discussion leaders report
- 12:15 p.m. - Buffet luncheon

County Society Officer's
Conference

January 30-31, 1971

Please register me for the Fourth Annual County Society Officer's Conference of the MSMA, January 30-31, 1971, The Ramada Inn, Jefferson City, Mo.

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Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two important considerations: First, please consult the complete prescribing information for precautions, warnings

and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppurative, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

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*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



The First District Meeting gave Dr. John R. Dixon (left), a Vice-President of the MSMA, and Councilor Martin an opportunity to discuss the affairs of their district.



(Left to right) First District Councilor John N. Martin, MSMA President Joseph L. Fisher, Mrs. Richardson K. Noback and Doctor Noback visit before taking their places at the speakers' table.

First District Doctors Meet in St. Joseph

Dr. Richard K. Noback, acting dean of the University of Missouri School of Medicine in Kansas City, and Dr. Joseph L. Fisher, President of the Missouri State Medical Association, were the featured speakers at the after-dinner program of the First District Meeting held at Hotel Robidoux in St. Joseph on Oct. 21, 1970.

Ninety physicians and their wives attended the dinner and program at the first District meeting to be held in many years, according to Dr. John N. Martin, Councilor.

Doctor Fisher discussed current problems of organized medicine and described the new

Health Care Foundation and its efforts to establish a peer review mechanism for Missouri.

Doctor Noback's presentation included a detailed discussion of the developments of the new medical school to be built in Kansas City. He illustrated his talk with approximately 80 slides.

Distinguished guests at the meeting included Drs. Donald M. Dowell, Chillicothe, a Past-President of the MSMA; John R. Dixon, Brookfield, a Vice-President of the MSMA; Elvin D. Imes, Maryville, Speaker of the MSMA House of Delegates; and Richard P. Bowles, President of Clay County Medical Society.



Mr. Ray McIntyre (left), Executive Secretary of the MSMA, is always on hand to answer questions. This time, he confers with Dr. Richard P. Bowles, President of Clay County Medical Society.



Dr. Donald M. Dowell (right), a Past-President of the Missouri State Medical Association, receives a special welcome from Councilor John N. Martin and Mrs. Martin of St. Joseph.



MSMA President Joseph L. Fisher (left) was a featured speaker on the program. He and Doctor Egeberg found many health care problems to discuss at the dinner meeting in November.



Roger O. Egeberg, Assistant Secretary of Health and Scientific Affairs, U. S. Department of Health, Education and Welfare, spoke to the physicians from the MSMA Fourth Councilor District.

Dr. Roger O. Egeberg, HEW Official, Speaks to Fourth District

Roger O. Egeberg, M.D., Assistant Secretary for Health and Scientific Affairs, U. S. Department of Health, Education and Welfare, and Missouri State Medical Association President Joseph L. Fisher, M.D., St. Joseph, were guest speakers at the Fourth Councilor District meeting on Nov. 20, 1970 at Stouffer's Riverfront Inn, St. Louis.

Speaking from a prepared text, Doctor Egeberg told physicians and their wives that the entire health enterprise of the nation, public and

private, must work together to bring about vast improvement in the health care delivery system.

He listed some fundamental considerations which he said would have to underlie any and all efforts to deal with health care problems today.

First, he said that there is no single, simple answer for all problems. He said that just training more physicians and health care professionals would not solve the problems, but neither would the adoption of some new scheme of health care



Five county medical society presidents posed for this picture with Fourth District Councilor Robert A. Mayer (center) and MSMA President Joseph L. Fisher (second from right). They are (left to right) Drs. Miles C. Whitener, St. Louis County; Thomas A. Schneider, St. Charles-Lincoln Counties; Donald L. Baker, Franklin-Gasconade-Warren Counties; Harold Donnell, Jefferson County; and Joseph C. Edwards, St. Louis City.



(Left to right) Dr. Miles C. Whitener and Mrs. Whitener, Dr. Thomas A. Schneider and Mrs. Schneider and Dr. Donald L. Baker give their undivided attention to Speaker Roger O. Egeberg who closed his talk with the suggestion that "the initiative for innovative programs in the delivery of health care must come from the health industry itself." Councilor Robert A. Mayer presided at the dinner.

financing such as compulsory national health insurance.

Second, Doctor Egeberg called for a system in which preventive health care would be widely available and acceptable to the American people. He noted that putting this idea into practice would require many changes in medical education, health planning and even the cultural heritage of which the teaching of Hippocrates forms a part.

Third, Doctor Egeberg said that it will not be easy to extend the reach of modern medical care into those areas that are so badly in need of it. He urged that ways be found to make work in the ghettos or in rural areas professionally attractive—"not just financially attractive."

In closing, he said that the most important aspect of a restructuring of health care delivery systems will be a better distribution of manpower and facilities and greater attention to the protection and maintenance of health.

He said that the Federal Government, as a major source of funds, can foster an environment in which change in the delivery of medical care can occur and, to some extent, can even impose change. However, the initiative for innovative programs in the delivery of health care must come from the health industry itself.

Doctor Fisher, addressing those in attendance, discussed the new Health Care Foundation of Missouri and its proposed role in the field of peer review and also gave attention to other programs and activities of the Missouri State Medical Association.

Robert Mayer, M.D., Councilor from the Fourth District, presided at the meeting.

St. Louis area hospital staffs held meetings prior to opening of the Councilor District meeting.

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Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

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Greene County Auxiliary First to Hold Recruiting Drive for Health Careers

Realizing that one of every ten high school graduates must be attracted to the health professions and occupations to meet current needs, the Woman's Auxiliary to the Greene County Medical Society, with the support of the Medical Society, pioneered in health careers recruitment in Missouri with a two-day health careers fair on Nov. 5-6, 1970 at the new Battlefield Mall in Springfield.

Titled "Health Careers Unlimited," the event was designed to demonstrate to the high school students and graduates in the area the unlimited opportunities now available in the allied health care fields. The project involved 14 counties and attracted the enthusiastic cooperation and exhibits of 20 area health occupation associations and three branches of the Armed Forces. The American Medical Association also presented exhibits.

Information on more than 300 health care career job categories was made available to the young people who explored the exhibits. Representatives were in attendance to answer questions and talk to the prospective students about educational requirements and financing.

Mrs. James S. Key, a member of Greene County Auxiliary and State Chairman for Health Careers for the Woman's Auxiliary to the MSMA,

served as coordinator for the fair. She said that the project was timed to coincide with the November state teachers' meeting and that letters of invitation had been mailed to all schools in the 14-county area of the Eighth Councilor District of the Missouri State Medical Association.

Mrs. Key also noted that the event marks the first time a health recruitment project of such magnitude has been presented in Missouri and that it is part of a national project of the Woman's Auxiliary to the AMA.

Mrs. Ned White, chairman, and Mrs. William Penninger, Mrs. George Klingner, Jr. and Mrs. Rex Lewis served on the Greene County Auxiliary Health Careers Committee in charge of the information booth and national displays. They also served on committees responsible for exhibits, publicity and education.

"Health Careers Unlimited" was financed by contributions from both the Greene County Medical Society and Auxiliary. In addition, the Medical Society approved a limited drive for contributions from appropriate organizations which were collected by Mrs. William M. Walker, Mrs. Walter German and Mrs. Guy Callaway, Jr.

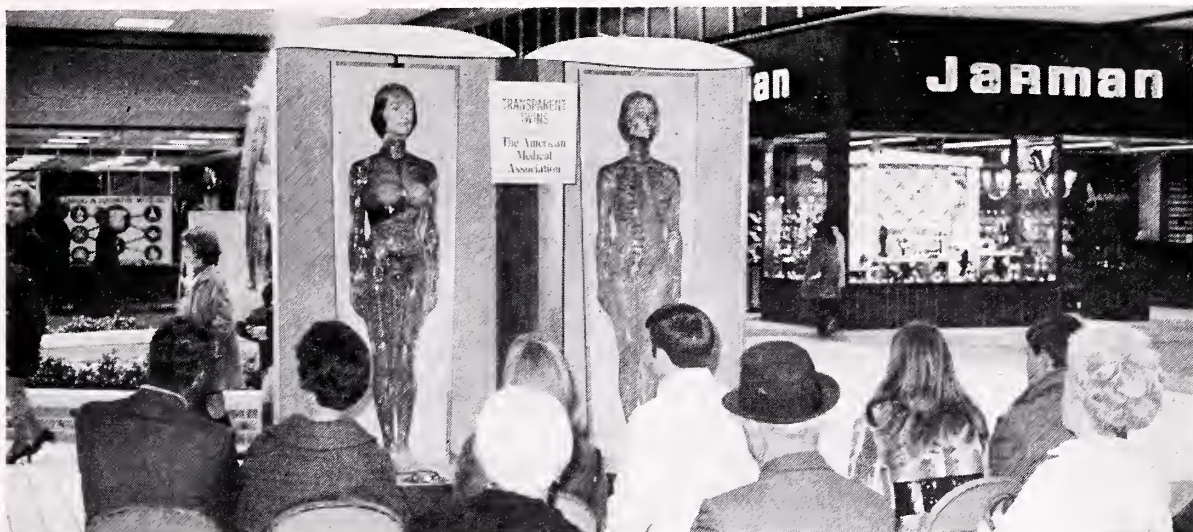
The fact that both the exhibitors and repre-



The Medical Technologists' booth at the fair attracted the attention and questions of the young people who came to learn about health career opportunities. Invitations were sent to all schools in the 14-county area of the MSMA Eighth Councilor District.



The Greene County Medical Society secured the American Medical Association's newest exhibit for the health careers fair in Springfield. Dr. Edwin M. Powell, member of the Society in charge of the exhibit, and Mrs. James S. Key, coordinator for "Health Careers Unlimited," discuss the display.



Many parents joined the students who viewed the 20-exhibit fair at the Battlefield Mall. This AMA "transparent twins" exhibit consists of two life-sized, transparent, plastic female models, one showing 25 organs of the body, the other the 200-bone skeleton and the nervous system. It included a taped message describing the function of each organ and system, which were illuminated individually as each was discussed.

representatives of the Battlefield Mall merchants have requested that the health careers fair be repeated in 1971 attests to the success of the project and the people it attracted.

Participating organizations and the types of exhibits they presented were as follows:

Greene County Medical Society Auxiliary, information booth; Greene County Medical Society, exhibit explaining the 300 medical and allied health fields; American Medical Association, "The Transparent Twins" exhibit; Springfield Pharmaceutical Association, display of a pharmacist at work; Springfield Licensed Practical Nurses, a cooperative display with the Vo-Tech School; City-County Health Department, exhibit on environmental health; Fourth District Nurses, display explaining different fields of nursing; Administrative staffs of Lester E. Cox Medical Center, St. Johns Hospital and Springfield Baptist

Hospital; Fifth District Radiologists, display of equipment; Physical Therapy, display of equipment; Inhalation Therapists, display of equipment.

Additional exhibitors were the Dental Society and Dental Assistants, display of dentistry; Medical Secretaries and Assistants, display of a modern doctor's office; Medical Technologists, exhibit explaining phases of medical technology; Veterinarians, display of truck used for farm calls; Speech and Hearing Clinic at Cox Medical Center, display of materials used; Dietitians, display showing local dietitian at work; Occupational Therapy Department of Cox Medical Center, display of equipment; Burge School of Nursing, information on school requirements and financing in their schools; U. S. Air Force, Army and Navy, exhibits showing military programs in health careers.

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Special Feature

Dr. George Penn—1800-1886

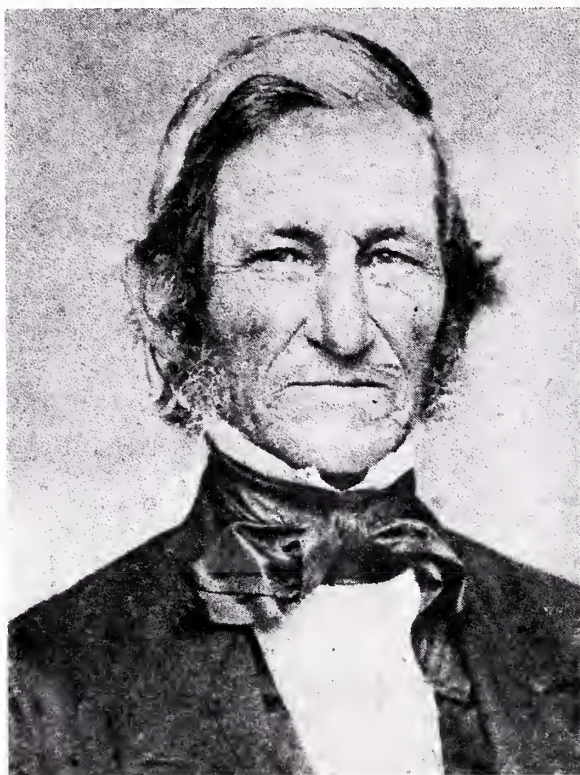
By

THOMAS B. HALL, M.D.

Arrow Rock

In presenting this feature to MISSOURI MEDICINE, Doctor Hall has supplied an unusual picture of one of the founders of the MSMA which was not available for publication in the "History of the Missouri State Medical Association" by Robert E. Schlueter, M.D., which was published in 1950.

Doctor Hall received his M.D. degree at St. Louis University in 1923. He has retired from the practice of medicine and is an honorary member of Jackson County Medical Society and the Missouri State Medical Association.



George Penn, M.D.

George Penn, M.D., was the son of Richard Penn of Nelson County, Virginia. He graduated from the University of Pennsylvania Medical School in 1827.

In 1830, Doctor Penn settled in Saline County, Missouri and became the partner of Dr. John Sappington of quinine fame and author of *Treatment of Fevers*, 1844.

In 1846, he was appointed Chief Surgeon of the famed Doniphan Regiment which he accompanied to Santa Fe, New Mexico.

On Nov. 4, 1850, Doctor Penn presided over a caucus of 136 Missouri physicians who convened in St. Louis at the First Presbyterian Church. This meeting resulted in the formation of the Missouri Medical Association.

Doctor Penn was offered the Presidency of the newly-formed Missouri Medical Association. He declined to accept "for reasons which he stated."

Doctor Penn was thanked by an appropriate resolution "for the able and important manner in which he discharged his duty as presiding officer of the Convention."

In the 1850's, he moved to his home, Ingle-side, near Pattonville, St. Louis County, where he died in 1886.

SOURCES

1. W. B. Napton: History of Saline County, Missouri, 1910.
2. R. E. Schlueter: History of the Missouri State Medical Association, 1950.

EARLE M. CHAPMAN, M.D.

Associate Clinical Professor of Medicine

Harvard University Medical School

The Choice of Treatment for Hyperthyroidism

Special Article

The following is a transcript of the address delivered by Doctor Chapman as his Visiting Professor's Lecture at the St. Louis University School of Medicine on May 15, 1970. MISSOURI MEDICINE expresses appreciation to Doctor Chapman for permission to extend the teaching influence of the Lectureship to the physicians of Missouri in this way.

TO the members of the faculty and students of the St. Louis University Medical School, first let me express my appreciation for your warm reception and the honor accorded to me by Professor Thomas F. Frawley in extending this invitation to serve as your Visiting Professor. I am impressed again with the clear purpose and vigor of your whole Department of Medicine that, in turn, has stimulated excellence in your team performance in the care of the sick. I have enjoyed sharing in your learning exercises, but now turn to the subject at hand which is the "Choice of Treatment of Hyperthyroidism."

Before we discuss the several methods available, we should first consider the natural history of the disease that we hope to cure, to relieve or to permit the patient to endure successfully. Are you familiar with the course of hyperthyroidism that has not been treated with what might be called specific therapy? I know of only one reference in the literature to this point designed to answer the strident opinions of many faith healers. W. Hale White, a distinguished English clinician, during his long career spanning the late 19th and early 20th century, described in 1925¹ the late results in 12 of his thyrotoxic patients. Seven of them died on an average of three and one-half years after the onset of the disorder and five lived on quite well for many years without so-called specific therapy. The disease just "burned out," as a few of us have witnessed.

Dr. John Eager Howard in his Billings' Lecture of 1967² described the era of sanatorium treatment in this country: there the ladies rested

even for years and were known to recover in that period before 1923, the year of Plummer's classic description of the response to iodine.³

However, hyperthyroidism may be a life-threatening metabolic disorder that usually favors the physician with a time factor, in which to prove his skill, that is much longer than in many other diseases.

Any treatment that is offered to the thyrotoxic patient should respond to three general considerations:

1. It should offer relief in a reasonable length of time.
2. It should provide the least economic loss to the patient or to the third party.
3. It should carry with it the least hazard.

With these points of reference, then, let us examine the methods available for your choice.

In reaching a choice for a single method of therapy, the doctor must adapt his clinical judgment so that it best fits the needs of the particular patient seated before him. This requires careful attention to the historical facts concerned with his or her whole life. Each patient deserves the recognition of his problem conditioned by the duration and effects of the disorder. The need for escape from stressful situations, the need for adequate sleep and rest or the needs to change an occupation are all matters for the physician's concern. Likewise are the needs to patiently answer the questions or fears of the patients whose hearts pound, whose muscles are weak and who believe they are rapidly failing in health. They deserve a reasonable explanation of the expected course of events dur-

ing the treatment proposed. If this is done before treatment, it will establish a relationship that almost insures success.

First, let us discuss ordinary iodine (I^{127}) or stable iodide. This is still to be used to ameliorate the symptoms of hyperthyroidism while awaiting the slower effects of radioactive-iodine or to diminish the vascularity of the gland immediately before operation and ease the surgeon's job. Historically stable iodide is the oldest treatment available and like anti-thyroid drugs and radioactive-iodine, it emerged as a by product of war. The violence of wars has seemed to stimulate man's cunning to develop new technologies that in some instances yielded peaceful applications.

In 1811, the English Navy's effective blockade of the French coast had cut off Napoleon's supply of saltpeter from Chile. He set the French scientists to work to discover a substitute, and Courtois,⁴ a chemical manufacturer, soon found the black scales of iodine from sea weed. Medical men were quick to recognize this element as the active ingredient in the kelp still used in the treatment of goiter. Then followed years of confusion in the role of iodine until Baumann's classic experiments in 1895⁵ which established the avidity that the thyroid holds for iodine.

Then iodide was used before surgery, after surgery and instead of surgery, but its biochemical mechanism remains a secret, although in a recent issue of the *Journal of Clinical Investigation*,⁶ there is the latest theory that iodide prevents release of the hormone from the thyroid. There is another theory, couchant, that iodide affects the enzyme peroxidase action that occurs in the endoplasmic reticulum of the cell.

From 1920 until 1940, the clinical responses to iodide therapy were carefully studied by J. H. Means and his students,⁷ but the *minimal suppressive* dose of iodide was never determined until 1962⁸ when the fear of war, the atom bomb and the consequence of contamination with ^{131}I in the fallout led to a meeting in the office of your previous Visiting Professor, George Thorn. There a plan to answer the question of how to suppress the thyroid quickly in children was developed. It was determined that 2 mg of iodide per square meter of body surface would in a seven- to 10-day period suppress the uptake below 5%. Hence, the effective use of iodine does not require giving Lugol's solution several times daily in large doses; two or three drops of a saturated solution of potassium iodide (50 mg to 150 mg) once daily will accom-

plish all that the traditional but often toxic doses of Lugol's solution provided.

In brief, then, iodide still has its useful role as it works quickly, is inexpensive and has only the hazard of an occasional allergic reaction with fever and adenitis. However, it is seldom adequate for the long range control of hyperthyroidism as it only suppresses the disease and permits it to smolder with the continuous risk of sudden exacerbation. We find it most helpful in the patients treated with radioactive-iodine whose thyroid seems sensitized to the iodide effect and who may avoid retreatment with ^{131}I by several months of suppressive therapy.⁹

Now, let us turn to anti-thyroid drugs. In 1940, the MacKenzies and McCollum at the Johns Hopkins studied the goitrogenic effects of sulfaguanidine in rats.¹⁰ Soon Richter and Clisby,¹¹ in the war on rats, discovered that phenyl thiocarbamide caused hyperplasia in the rat's thyroid. It was this observation that led Astwood directly to the introduction in 1943¹² of the drugs of the thiouracil series that block the conversion or synthesis of iodide into thyroid hormones. They are tri-iodothyronine (T_3) and thyroxine (T_4).

The anti-thyroid drugs now have had 27 years of clinical usage and it is fair to quote Raymond Greene¹³ that "they have not fulfilled the expectations of early enthusiasts."

In older patients, relapse after treatment is almost inevitable. The chances of controlling the disorder in those with large goiters is very unlikely. The added use of iodide on top of drug therapy is an error that feeds the production of hormone or storage. The hazard of toxic reactions has been reported variably from 3% to 12%, thus necessitating a change to another mode of therapy.

The *ideal* use, then, for anti-thyroid drugs lies in the young person with disease of short duration and a small goiter. The most satisfactory drugs and the least toxic ones are methimazole (Tapazole®) or carbimazole in doses of 10 mg at six- to eight-hour intervals daily until, in a few weeks, the patient loses the symptoms and signs of excess hormone production. Occasionally, larger doses are required. The best guides to response are the simple clinical observations of the weight, the pulse rate, the goiter size and perhaps one or two laboratory tests of thyroid function. These are the level of blood T_4 , or blood T_3 resin uptake which together may then provide you with the free thyroxine iodine.¹⁴

Once a base line of low hormone production is reached, a maintenance dose of 5 mg to 10 mg

daily should suffice to suppress the disorder for the next one or two years while under observation at intervals of three to four months. At the end of a predetermined date, understood by the patient, the treatment should be stopped but the observation continued. Many do not approve of the method of Howard² which permits perpetual drug treatment mixed with thyroid USP over a course of many years, a life time of "benign neglect."

Tests designed to predict or identify those patients who will relapse have been sought, but so far none has been consistent. The suppression test of ¹³¹I uptake may help in some cases.¹⁵

For those patients who do relapse in the months or years after such a program of drug therapy, definitive therapy is indicated.

At present, there are two methods of definitive therapy:

1. Surgical ablation.
2. Medical ablation with radioactive-iodine (¹³¹I).

There is a choice and, for increasing numbers, the evidence favors the least hazardous and least expensive one to be radioactive-iodine.

However, for very large or multinodular goiters, either drugs or radioactive-iodine may better be used to prepare the patient for subtotal thyroidectomy, which provides the most rapid form of relief, but still with significant complications including hypothyroidism nearing that found after the larger doses of radioactive-iodine. Hedley *et al*¹⁶ reported hypothyroidism in 37% of surgically-treated patients who were recalled many years after operation, using the methods similar to our USPH "Follow-Up Study."

Let us now explore the reasons favoring and the guide lines for the proper use of radioactive-iodine. First, let me indulge in a favorite historical review. Certain scientific events preceding World War II contributed to the peaceful use of atomic energy in 1946 when ¹³¹I was released for broad usage. I was not present when Einstein persuaded Roosevelt to split the atom, but I was present on Nov. 12, 1936 at a colloquium held on the subject, *What Physics Can Do for Biology and Medicine*, at the Harvard Medical School. Karl Compton, then president of Massachusetts Institute of Technology, described the discovery of radioactive-iodine by Fermi two years earlier that was published in the British Journal, *Nature*.¹⁷ Seated about the luncheon table, our group from the Thyroid

Clinic of the Massachusetts General Hospital, headed by J. H. Means and Saul Hertz, were in a state of exultation by this announcement. Professor Means immediately approached Compton at the close of the meeting and there began a co-operative enterprise between the clinicians at the Massachusetts General Hospital and the physicists at the Massachusetts Institute of Technology that led to the rapid development of the use of radioactive-iodine as a physiologic tool¹⁸ and, later, as a therapeutic agent^{19, 20} that has endured almost 30 years of being considered an experimental method.

The first patient was treated by Hertz in January, 1941, with I¹³⁰ from the cyclotron at Massachusetts Institute of Technology. The dose then was so small that it was ineffective. Later, Hertz reported his series of 26 patients treated with I¹³⁰ combined with oral iodide.²¹ It remained for Chapman and Evans²² to define the single effective dose of radioactive-iodine without adjunctive therapy and to produce myxedema by a single dose of only radioactive-iodine.

The use of this form of atomic energy, ¹³¹I, spread rapidly after 1946 and, yet, great fear of its late effects limited its use to older persons and especially those with recurrence of disease after operation.

The potential biological hazards were three:

1. A shortened life span of the treated person by some unknown mechanism.
2. A somatic effect on tissues thus leading to cancer or leukemia.
3. Possible genetic defects in children born of treated parents.

Let us consider especially these last two fears. In 1961, the United States Public Health Thyrotoxicosis Follow-Up Study was started by the National Center for Radiological Health. The first report in 1967,²³ which included a total of 22,000 patients treated with ¹³¹I and their controls (14,000) treated with drugs or surgery, revealed that the incidence of leukemia in the ¹³¹I-treated group did not differ significantly from the incidence in the control patients. The second report delivered at the American Medical Association meeting in New York on July 14, 1969 stated that "The preliminary analysis indicates that the incidence of thyroid cancer is not different in those treated by thyroidectomy and those treated with radio-iodine."²⁴

Thus the prediction of 1960¹³ seemed fulfilled; it said, "It seems probable that the fear of carcinogenesis and leukemia will one day

prove to be illusory and treatment with radioactive-iodine will become general for younger patients."

We and most large clinics in the United States now treat patients of any age. However, our concern continues for the third hazard, the possible genetic defects in children born of treated parents. Unfortunately, evaluation of this hazard was not included in the USPH study because of an avowed difficulty in obtaining control data. The fear of genetic damage persists in those who do not accept the conclusion of the Atom Bomb Casualty Commission²⁵ that there were no demonstrable increases in major congenital abnormalities, stillbirths or infant mortality in persons born of parents exposed to doses of radiation much greater than from doses of radioactive-iodine. The *whole-body* radiation dose of 5 rads to 25 rads from present doses of ¹³¹I given in the treatment of hyperthyroidism are not comparable to the extremely high doses (100+) from the bombing exposures.

I would like to tell you briefly of our concern and efforts to answer this fear of possible genetic effects as well as reproductive events (Table 1) in women. We began a pilot search in 1968 for genetic defects in more than 300 children above three years of age born of parents treated at any age with ¹³¹I at the Massachusetts General Hospital. To date, 219 children have been recalled. The results show that:

Eighteen of 20 born of treated fathers were normal

One male had a ureteral structure

One had congenital heart disease

One hundred and ninety of 199 children born of treated mothers were normal

Two had congenital heart disease

One mongolism (mother had mumps, third trimester)

One club foot

One congenital deafness

One bilateral hernia

Two of four in family were affected, one with hydrocephalus, the other retarded.

One XYY karyotype

Karyotypes were done only on 41 of the 219 and only 21 were done on matching children (controls born before treatment). Sixty-one had negative screening tests for amino acid defects. The dangers of inducing new mutations following this therapy have been calculated to result in a miniscule increase in birth defects above the 4% figure now given for the general population.²⁶ Paul Starr, with an early experience in treating 73 children with ¹³¹I, recently reported²⁷

that 28 of those 73 were young women and had given birth to 52 normal children. Most of these mothers had been made hypothyroid by their treatment with the larger doses previously employed.

Twelve of our females treated before age 18²⁸ have given birth to 18 healthy children. One father had a normal baby. Transmission of genetic damage has not been demonstrated in any patient treated with radioactive-iodine for thyrotoxicosis.

Thus, on the basis of these considerations of the biologic hazards and the available evidence, one cannot forbid the use of radioactive-iodine at any age except on emotional or shrinking theoretical grounds. The hazard must be compared to those well known for surgery. The risk of hypothyroidism, since the lower dose employed after 1964,⁹ is comparable to that found following subtotal thyroidectomy.

Soon after the rising incidence of hypothyroidism^{29, 30} from radioactive-iodine treatment was emphasized in the early 1960's, the British Medical Research Council called a meeting in London in 1964 and thereafter our dosages were reduced to one half those previously employed. By 1967, Dr. Garrett Hagen who worked then in our Thyroid Clinic and is here today as a member of Dr. Frawley's staff, joined with me in review of our experience with doses that averaged 3.0 mc that provided slightly more than 5,000 rads to the thyroid gland. The incidence of hypothyroidism in our treated patients⁹ continues about 7% the first year and then 2-3% increment each year thereafter. With these smaller doses, the need for second doses has increased, but, as mentioned before, the use of oral iodide (50 mg to 150 mg) once daily often suppresses the disorder while the continued radiation effect results in a euthyroid state without medication by the end of a year.

We reject the idea that it is sound clinical practice to overtreat any patient with radioiodine and then administer thyroid substitution. In addition, there has been no evidence that ¹³¹I therapy initiates a progressive thyroid autoimmune process.³¹

Contraindications to the use of radioactive-iodine are, first, pregnancy beyond the fourth month. We have treated five mothers, four before the third month of pregnancy and one in the seventh month and all children are normal with normal karyotypes. Second, contraindications exist in the months following myocardial infarction, as preformed hormone released may aggravate the cardiac problem. The use of anti-thyroid drugs in patients with severe cardiac

symptoms has been employed to deplete the gland of stored hormone before administering radioactive-iodine. Third, during anti-coagulation therapy, because of the hazard of intra-thyroid hemorrhage.

The presence of severe exophthalmus is not considered a contraindication to radiation therapy. Single toxic nodular goiter responds well to radioactive-iodine, especially if the paranodular tissue is protected by the administration of thyroxine during treatment as recommended by Hörst.³²

In conclusion, a physician has several choices in the treatment of hyperthyroidism. The majority are medical methods, and for definitive therapy, radioactive-iodine is now the method most often employed in our patients of any age with moderate-sized goiters or who relapse after drug therapy or who prefer radiation treatment because it is less expensive and avoids hospitalization as well as the known hazards of surgery. Yet, these same patients will accept the explained and expected complication of about 10% incidence of hypothyroidism at the end of the second year after such therapy and the 10%

chance that a second dose may be required in four, six or 12 months after the first dose. Surgery remains the choice for huge diffuse or nodular goiters after proper preparation by medical methods including radioactive-iodine.

TABLE 1
REPRODUCTIVE HISTORY OF 103 WOMEN

	Full Term Children	Premature	Miscarriages
Before ¹³¹ I	174	11	28
After ¹³¹ I	142	10	27

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Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy,

during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.



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In Memoriam

Mead, S. T., M.D., Concordia, a graduate of the University Medical College, 1907; member of Saline County Medical Society; age, 91; died Oct. 4, 1970.

Smith, Grafton A., M.D., Columbia, a graduate of Washington University, 1948; member of Boone County Medical Society; age, 45; died Oct. 19, 1970.

Day, Anthony B., M.D., Marshall, a graduate of Washington University, 1918; member of Saline County Medical Society; age, 81; died Nov. 9, 1970.



WASHINGTON

Rep. Wilbur D. Mills (D., Ark.) expressed concern about claims that prepaid group health care, or health maintenance organizations, could solve most of the problems of Medicare and Medicaid.

Speaking to a group of business executives, the chairman of the House Ways and Means Committee, which handles Medicare and Medicaid legislation, said that he believed health maintenance organizations were "a reasonable and perhaps competitive alternative" for providing government-financed health care.

"However," he added, "I have become concerned that we will expect a great deal more from them than is likely to occur. The health industry is too diversified and its problems too complex to ever conclude that any one approach will solve most or all of the problems."

Americans broke a spending record for health care this past year, paying out about \$70 billion for everything from aspirin to hospitals, Mills also said. Inflation accounted for half the boost of about 16% over the \$60.3 billion spent in the previous fiscal year, he said.

Mills said he expects that health care spending figures for fiscal 1970, which ended July 1, would show that \$7 out of every \$100 spent in the United States for all goods and services went for health expenditures. "Just three years ago," Mills said, "it was estimated that we would not reach the 7% level until 1975."

He noted, however, that the fiscal 1970 figures would show "for the first time" that federal spending did not increase as fast as private spending for health services. "The reason for this development is that the Medicare program did not grow as fast as it had been growing," Mills said.

Mills said the new health care figures point out two major characteristics of the health industry—"rapidly escalating costs and rapidly increasing public involvement."

"Public funds now pay for one-half of all the hospital care provided in the country," Mills said. "Medicare and Medicaid together account for almost all of the half."

* * *

National health insurance is shaping up as one of the major domestic issues before the 92nd Congress with catastrophic illness coverage gaining support from both Democrats and Republicans.

Advocates of catastrophic coverage counted on the Nixon Administration supporting such a plan although Elliot L. Richardson, secretary of Health, Education and Welfare, called for its rejection at that time when it unexpectedly was placed before the Senate Finance Committee in executive session

late last year near the end of the 91st Congress. However, he left the door open for Administration support later.

"A proposal with this impact on the health care system deserves the closest kind of examination, not the hasty look it has been given in the waning days of an executive session," Richardson said.

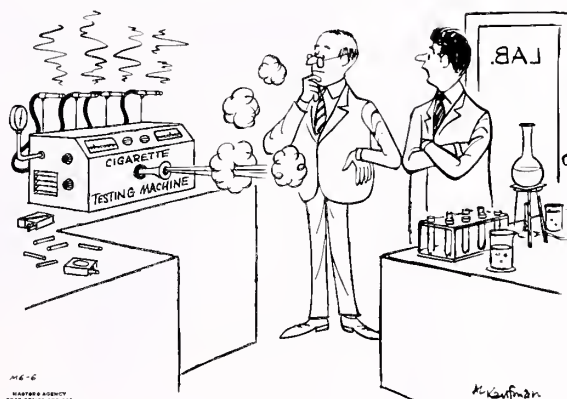
The secretary's comment was in response to the surprise announcement by Sen. Russell B. Long (D., La.) that he would offer a catastrophic illness coverage plan to the finance committee of which he is chairman.

Long's plan called for the government to pay 80% of all medical costs beyond the first 60 days of hospitalization or the first \$2,000 of physicians' bills for all Americans who pay Social Security taxes and are under 65. He estimated the cost at \$2.5 billion a year to be financed by a one-half of 1% increase in Social Security taxes to be shared equally by employers and employees.

The American Medical Association also cleared the way to add catastrophic coverage to its Medigap plan for voluntary national health insurance. The House of Delegates at the AMA 1970 clinical convention in Boston approved a report of the Board of Trustees listing catastrophic coverage among the modifications and improvements being considered before reintroduction of the Medicare legislation.

All national health legislation introduced during 1969-1970 died with the final adjournment of the 91st Congress, and some modifications were expected to be incorporated in most of the leading proposals before their reintroduction in the 92nd Congress.

Rep. Durwood G. Hall (R., Mo.), a physician, introduced during the final months of the 91st Con-



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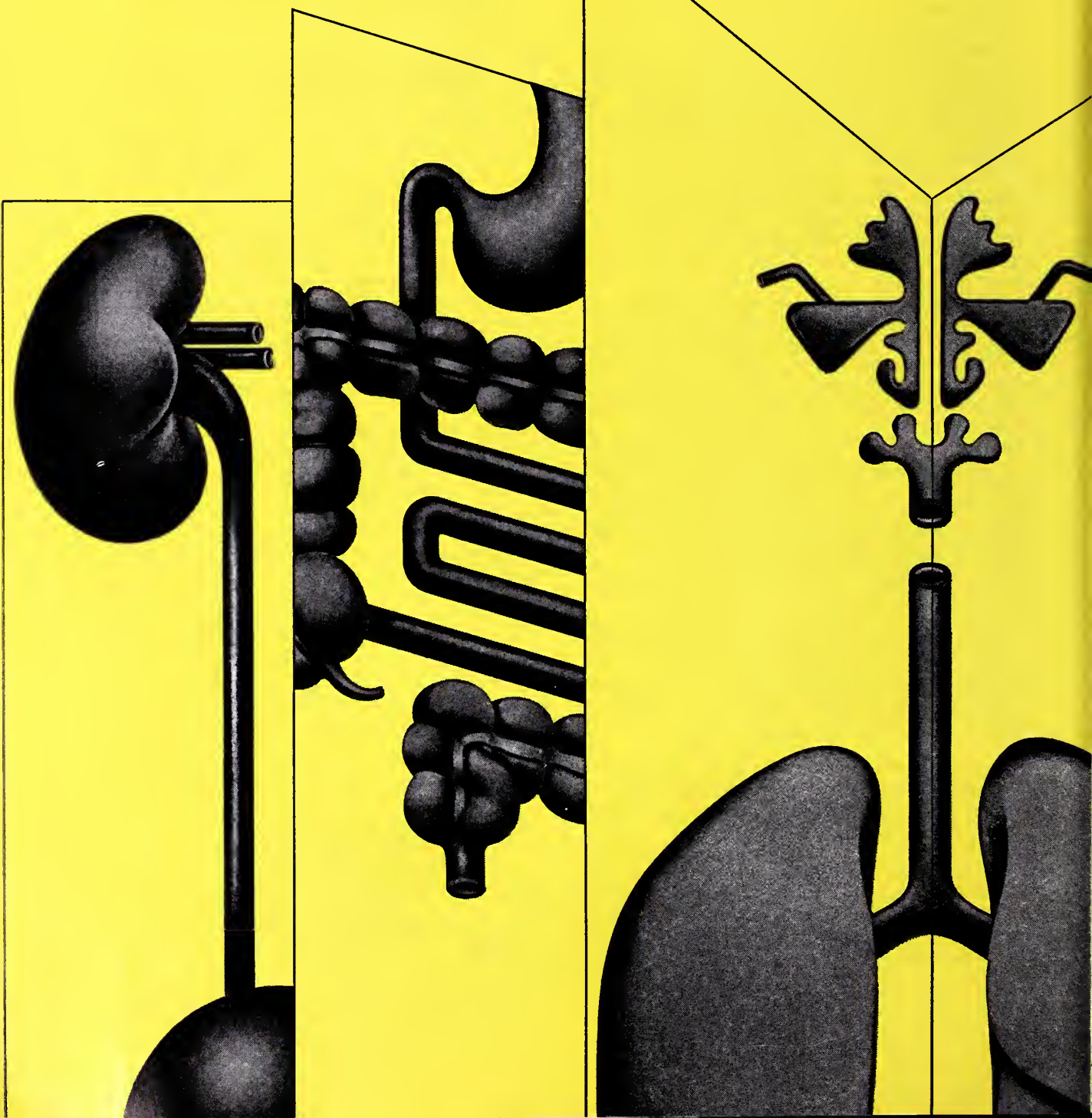
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In Washington

(Continued)

gress legislation that would establish a government program of catastrophic illness insurance for all Americans along with a program of basic health care protection for the medically indigent.

Part A (Basic Protection) of Hall's proposal would replace the present Medicaid program. Each state would be authorized to determine the level of medical indigence in that state and to purchase, from private carriers, basic health insurance coverage for the medically indigent. The states would receive federal reimbursement for 85% of the costs incurred in providing this basic coverage.

The states also would purchase coverage for the costs of catastrophic illness expenses for the medically indigent. There would be no federal reimbursement for this state coverage.

Part B (Catastrophic Coverage) would have the secretary of HEW establish a program of insurance against the costs of catastrophic illness. Any United States resident whose income is above the level of medical indigence would be entitled to reimbursement for expenses incurred as a result of catastrophic illness. Federal reimbursement would be 90% of total eligible expenses.

Eligible expenses would be those health care costs above whichever of the following is the larger: (a) \$1,000 for those 65 or \$5,000 in any other case, or (b) 25% of the gross income of the individual or his family.

Funds for this two-part program would be managed by a Federal Health Care Trust Fund. Money for this trust fund would be raised through a 0.4% tax on wages and self-employment income and on other income in excess of \$2,000 up to the maximum income in use for purposes of the social security tax. There would also be a 0.4% employer tax.

Hall estimates that the Part A would cost the federal government about \$3.7 billion a year. The cost to the states for Part A would be about \$600,000. Medicaid presently costs the states about \$2.5 billion.

There was no estimate as to the cost of Part B, but Hall said that it would be only a small fraction of the cost of a comprehensive national health insurance program of the type being pushed by organized labor.

"All government efforts to date have been directed at providing first-dollar coverage," Hall said. "Invariably, first-dollar coverage entails high administrative costs, for it requires that many small claims be processed. Thereby, the substance of the program is eroded. My aim is to amend and to protect existing law or substitute therefor so that the public can be insulated from disastrously high costs; give meaningful relief to those hardest hit by extensive medical expenses; make the existing program work easier and at the same time make the greatest use possible of the dollars available.

medical melange

Notes of interest from Here

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and There

Dr. Herbert R. Domke, former acting director of health and hospitals in St. Louis, has been appointed acting director of the State Division of Health by **Gov. Warren E. Hearnes**. He replaces **Dr. L. M. Garner** who resigned to resume a position he had held with the Health Division.

Dr. Richard A. Sutter, St. Louis, has been appointed medical director and supervisor of medical care at Granite City Steel Company. He will be assisted by the associate physicians of the Sutter Clinic of which he is medical director. Doctor Sutter also is a member of the AMA Council on Occupational Health, a member of the Permanent Commission and International Association of Occupational Health, a former member of the Board of Directors of the Industrial Medical Association and a past-president of the Central States Society of Industrial Medicine and Surgery. He has served as chairman of the MSMA's Committee on Industrial Health and is now a member of the Commission on Public Affairs.

Dr. Harry S. Jonas, Independence, has been appointed to the board of commissioners of the Land Clearance for Redevelopment Authority by Mayor **Phil K. Weeks** of Independence. Doctor Jonas served as a city councilman from 1964 to 1968 and has served on the city planning commission. He is president of the Community Welfare League and a past-president of the Independence Rotary Club.

Dr. Harry Rosenbaum, former director of the Department of Ophthalmology at the Jewish Hospital in St. Louis, has been elected president of the Medical Staff Association of the hospital. He succeeds **Dr. Morris Alex**. A member of the staffs of the Jewish, Barnes and Children's Hospitals, Doctor Rosenbaum is director of the Department of Ophthalmology at the Veterans Administration Hospital and a consultant in ophthalmology at the Missouri Crippled Children's Service. Other newly-elected officers are **Drs. Leo Sachar**, president-elect for 1972; **Llewellyn Sale, Jr.**, vice-president; **Martin Bergmann**, secretary; and **Arthur H. Gale**, treasurer.

Dr. Jerome H. Schmidt has been elected president and chief of the medical staff of Memorial Community Hospital in Jefferson City. Also elected to the Executive Committee were **Dr. James F. Leslie** and **Dr. Robert H. Tanner**.—**Dr. Clarence M. Pickard**, Columbia, has been elected chief-of-staff at Boone County Hospital. Other new officers include **Dr. Joe R. Smith**, vice-chief-of-staff, and **Dr. Leland U. Pfefer**, Secretary-Treasurer.

A Board of Health Committee, whose goal is improved health service for the people of Springfield and Greene County, was formed by the **Greene County Medical Society** to work with the city-county health department. **Dr. Howard McAlhaney**, President of the Society, and City Manager **David Burkhalter** report that the idea for the committee grew from informal meetings regularly held between city administrators and society members during the past two years. Doctor McAlhaney was joined by the chairman of the four committees who will call on others of the medical profession to aid in their initial assignments. They are **Drs. Cecil Auner**, community health care; **Jim Cook**, ambulance service; **Richard Loeb**, communicable diseases; and **Ned White**, emergency medical service.

Dr. Melvin C. Kasten, Cape Girardeau, has been reappointed to the State Board of Healing Arts by **Gov. Warren E. Hearnes**.—**Dr. G. Bruce Lemmon, Jr.**, Springfield, is the president of the newly-organized Planned Parenthood Association of Southwest Missouri. The group is a sub-unit of the Kansas City Chapter of Planned Parenthood.

Dr. Bennie N. Till, Poplar Bluff, has joined the staff of Kneibert Clinic and Doctors Hospital in the practice of family medicine. He was a resident in surgery at St. Louis County Hospital in 1968. Until recently, he was a member of the executive staff of Dexter Memorial Hospital. Doctor Till was selected to appear in the 1970 edition of "Outstanding Young Men of America" for his community and professional activities.

Dr. Jack Vineyard, formerly of Carrollton, has accepted the position of director of emergency service at St. John's Medical Center in Springfield. Doctor Vineyard is the first fulltime emergency physician for the hospital.

Dr. Ben H. Koon, Bolivar, was one of four outstanding citizens to receive Life Service Awards from Southwest Baptist College. A native of Bolivar and an alumnus of the school, Doctor Koon is on the Board of Education in Bolivar and is active in Boy Scouts activities in the area. He is a curator for Central Methodist College in Fayette and on the board of directors of the Missouri Academy of Flying Physicians.

Dr. Albert M. Estes, Cape Girardeau, represented the Missouri Heart Association at the annual meeting and scientific sessions of the American Heart Association in Atlantic City, N. J. in November. He is a member of the association board and serves on the budget and finance, program planning and cardiopulmonary resuscitation committees.



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Missouri Medicine

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LARRY E. MILLIKAN, M.D. *and*
PHILIP C. ANDERSON, M.D., *Columbia*

New Preventive Treatment for Skin Cancer

CANCER CHEMOTHERAPY AGENTS can selectively destroy superficial skin cancers without injury to normal tissues. The application of the agents topically at the site of the cancer is a superior new method of treatment which could lead to the eradication of disfigurement due to cutaneous epitheliomas.

The actinic keratosis is an early cancerous lesion of the skin which is the result of years of damage by the sun. The lesion is a disordered cancerous cell growth, but still contained fully within the skin. Sun-induced cancers appear early and most frequently in those fair-skinned, blue-eyed Missourians of Northern Europe ancestry who follow outdoor occupations, the majority of whom have marked precancerous involvement of all sun-exposed skin by the fifth decade of life. Since these keratoses will slowly transform into aggressive squamous cell cancers, early treatment is necessary to avoid disability, disfigurement or even death. In the past, our therapy has been too destructive, time consuming and expensive to the patient. Often, the surgical treatment of widespread keratoses produced excessive cosmetic disfigurement.

Modern chemotherapy began with the discovery of the sulfonamides by Domagk in the mid-1930's. When it was discovered that the drugs worked by interfering with normal cellular metabolism of the growing bacteria, this phenomenon impressed medical investigators who recognized that the cancer cell was reproducing almost as rapidly as bacteria. Unlike the sulfa-

susceptible bacteria, the human cancer cell does not require para-amino benzoic acid which explains why it is not harmed by sulfonamide. Some other way to produce a "metabolic road-block" on human cells was sought. Aminopterin and Amethopterin were expected to affect folic acid metabolism; purine and pyrimidine analogs, 6-mercapto purine, 5-fluorouracil and others held promise in blocking the synthesis of nucleic acids. When these theoretically useful agents were tested and found useful in the clinical situation, cancer chemotherapy became a medical specialty.

5-fluorouracil was introduced as a chemo-

A new drug, 5-fluorouracil, has recently been released for topical therapy of actinic keratoses. The actinic, or solar, keratosis is an early skin cancer which is exceedingly common in rural Missourians, especially those who primarily work in the out-of-doors. This drug represents a breakthrough in therapy of these lesions because the patient can apply it himself, cosmetic results are excellent and surgery is not required. The authors review the pharmacology of the drug and present an outline of therapy. Doctor Millikan is an Assistant Professor and Doctor Anderson is an Associate Professor and Head, Division of Dermatology, University of Missouri Medical Center.

therapeutic agent in 1957.¹ In the early 1960's, dermatologists first began using this agent topically for the treatment of actinic keratoses.² The difficulty in compounding and stabilizing the topical lotion from the intravenous solution has limited its widespread use until the present.

Two new preparations now are available in most drugstores: Fluoroplex (1% fluorouracil solution) and Efudex (2% or 5% fluorouracil lotion and 5% fluorouracil cream). Properly, we will see a great increase in the use of this drug by family physicians. It is to be expected that many of these physicians may initially experience difficulty in obtaining the best response and may mistake a normal erythematous response to therapy as a complication or reaction of the drug.³ We will briefly review the pharmacology and standard treatment regimens for this drug and suggest some methods for application.

The actinic keratosis is characterized by chronic thickening, scaling or crusting and, in some cases, localized atrophy with marked telangiectases and pigment in the surrounding skin. With brief experience, the lesion is easily identified. The changes are usually limited to sun-exposed areas, especially the prominences of the face. Clinical examination alone can decide the indications for treatment. The indication for prophylactic treatment is simply that sun-damage and some typical keratoses are found by the examiner. The treatment of choice is topical 5-fluorouracil. Treatment is inexpensive, conservative of time and normal skin and is best to avoid cosmetic disfigurement. The use of the standard treatment regimen outlined below usu-

ally gives an excellent result without scar. Treatment of lesions other than actinic keratoses may require other methods.

5-fluorouracil has three modes of action,⁴ all are directed against the genetic or nucleic acid material in the nucleus of the cancer cell. A metabolic roadblock is placed in the synthesis of both desoxyribonucleic acid and ribonucleic acid. 5-FU serves as an abnormal precursor in the production of ribonucleic acid yielding an abnormal nucleic acid that cannot function in the cellular metabolism; the drug also acts more directly by blocking incorporation of other precursors into RNA with the end result of totally shutting off the synthesis of RNA, which is necessary for all protein and enzyme synthesis. 5-fluorouracil, thereby, can cause a severe disruption of normal cellular metabolism. Because the cancer cell is metabolizing rapidly, the drug is taken up in large amounts leading to the selective destruction of the abnormal cells in the epidermis. Further, we suspect that the normal epithelial barrier is impaired in an actinic keratosis allowing greater penetration through the skin and absorption of this drug into the involved areas. By these two mechanisms, the drug is highly specific in destroying only those dysplastic areas of the skin⁵ and it has been shown not to affect normal skin.⁶

CLINICAL USE OF 5-FLUOROURACIL

Usually, the drug is applied to the face in the involved areas twice daily for 21 days. Onset of the reaction may be delayed for several days or a week. The erythematous reaction usually will persist for two or more weeks after stopping therapy. We recommend the patient return for reevaluation two weeks after his course of therapy has been completed. The benefit to a patient with severe actinic changes is most dramatic; the involved skin undergoes a marked reversal of changes and the patient often appears many years younger. Any person whose skin damage is severe enough to require 5-FU treatment should have semiannual checkups. To deal adequately with more advanced skin cancers, any large or ulcerative lesions are biopsied prior to therapy and lesions persisting after three weeks application may be surgically excised.

In many patients with severe actinic damage and many keratoses, therapy with 5-FU denudes many more areas of cancerous skin than were clinically apparent even by expert examination. Many unexpected precancerous areas may show

For Additional Information

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for a three-minute résumé of the use and complications of 5-fluorouracil.

DIAL 314-442-5111

to submit questions.

For the first time, a telephonic consultation service is presented in conjunction with the scientific paper to assist physicians in the use of this new drug for skin cancer. Physicians are invited to call the dial-in telephone-recording for more information concerning the advantages or disadvantages of 5-fluorouracil or to ask questions. Details of this service are presented in the final paragraph of the article.

(Continued on page 43)

Treatment of Sliding Esophageal Hiatal Hernia

Case Reports

UNTIL RECENTLY, the indications for surgical treatment of hiatal hernia have been rather controversial, reflecting the dissatisfaction with the long-term functional and anatomic results of various types of surgical repairs previously used. Careful follow-up analyses of operated patients, new anatomic studies of the esophagogastric junction and physiologic information from esophageal motility studies and cinefluorography have focused attention on the shortcomings of the multiplicity of corrective procedures that have been devised in the last three decades. The repair of hiatal hernia has previously been associated with a significant recurrence rate and with frequent persistence of gastroesophageal reflux even when adequate anatomical hernia repair could be demonstrated.¹⁻³ In addition, reflux esophagitis can occur without a demonstrable hiatal hernia⁴ and, conversely a hernia can be present without the occurrence of symptoms of reflux.⁵ This accumulated information has prompted the evolution of a surgical procedure which is gaining wide acceptance and whose long-term results have changed our concept of intractability in this disease.

DEFINITION

Two types of herniation through the esophageal hiatus of the diaphragm may be distinguished: (1) sliding type where the esophagogastric junction moves through the hiatus into the posterior mediastinum so that it occupies an intrathoracic position cephalad to the stomach which follows it and (2) the paraesophageal type, a condition in which the fundus of the stomach rises into the chest alongside the lower esophagus, while the phrenoesophageal ligament is intact posteriorly and the gastroesophageal junction lies in its normal location.

Hiatal hernia is relatively commonly encountered at the time of upper gastrointestinal radiographic examination, and special diagnostic maneuvers may disclose one in as many as 30 or even 40% of patients studied.^{6,7} The sliding type of hiatal hernia is most common. Para-

esophageal hernias constitute less than 2% of all herniations through the esophageal hiatus.⁸ This discussion is confined to the more common and more frequently symptomatic sliding esophageal hiatal hernias.

Intractability, although defined as a situation not easily governed, managed, directed or cured—a refractory condition—is often described as a state of affairs when an operation becomes necessary. Unfortunately, this suggests failure of nonoperative management. It must be remembered that an hiatal hernia which produces symptoms is an anatomic defect which has progressed to a physiologic defect. Nonoperative treatment of an hiatal hernia is only palliative at best. Cure is obtained only by surgical reconstruction. The case must rest, then, with how effective this reconstruction or cure is. Therefore, intractability in the practical sense is determined by the effectiveness of operative treatment. An effective procedure which corrects an anatomic abnormality and restores normal physiology, which has minimal risk, low morbidity and a low recurrence rate, should become the treatment of choice for patients with intractability, i.e., those who are not *easily* managed and have persistent symptoms. Such a procedure is now available and this report will review the background for its development as well as its results and impact on the concept of intractability in sliding esophageal hiatal hernia.

PATHOPHYSIOLOGY

The majority of these hernias are asymptomatic, but when symptoms occur, they usually result from derangement of gastroesophageal function caused by the abnormal anatomy. Competence of the esophagogastric mechanism and prevention of reflux depend primarily on the integrity of the intrinsic lower esophageal sphincter,^{9,10} which is assisted by the anatomical arrangement in this region, namely the pinchcock action of the diaphragm,¹¹ the gastric sling fibers and the acute esophagogastric angle,¹² the intraabdominal segment of esopha-

gus¹³ and the mucosal rosette at the gastro-esophageal junction.¹⁴

Sliding esophageal hiatal hernia is characterized by displacement of the esophagogastric junction cephalad and posteriorly into the thorax, with the stomach following it, and enlargement of the hiatus (by separation of the crura posteriorly and laterally) in proportion to the amount of stomach protruding through it. This is accompanied by alterations of the anatomical relationships which are unquestionably related to the disturbance of the esophagogastric mechanism that may coexist. The acute angle between esophagus and stomach is lost, the phreno-esophageal ligament is stretched and attenuated, especially anteriorly and laterally, and the mechanical factors that support sphincteric function are lost. The intrinsic sphincter, which seems to be a weak one at best, is then placed at a mechanical disadvantage and frequently becomes incompetent. However, not all patients with a sliding esophageal hiatal hernia have an incompetent sphincteric mechanism. On the other hand, reflux can occur without a demonstrable hiatal hernia or after a repair which supposedly places the sphincter back in its normal position, suggesting that there may be cases in which the sphincter is permanently incompetent regardless of its position.

Whatever the precise mechanism of sphincteric failure in these patients may be, the resulting damage is directly related to the enzyme activity of the juices bathing the esophagus. Particularly damaging is the reflux of nighttime secretions of the herniated gastric pouch which are not neutralized by active salivation or by mucous secretion from the body of the stomach. The inflammatory process of severe esophagitis, as it develops, may in itself then lead to destruction of the intrinsic sphincter, resulting in its further weakening or even complete incompetence.

CLINICAL MANIFESTATIONS

Sliding esophageal hiatal hernia is one of the most common abnormalities of the esophagus and stomach between the ages of 40 and 70 years, and many patients in whom such a hernia is demonstrated are, and remain, free of any significant symptoms. Nonetheless, this hernia can produce significant disability and threatening complications as a result of the reflux of acid-peptic gastric secretions on the esophagus. The major threat to the patient is the development of a stricture from prolonged esophagitis

and involvement of the respiratory tract due to aspiration of regurgitated gastric contents during sleep, which may occur in the absence of any other symptoms.^{15, 16}

The typical symptoms of heartburn, postural regurgitation (particularly with recumbency on the right side), gaseous eructation and intermittent dysphagia are manifestations of incompetence and varying degrees of esophagitis. In some patients, the symptoms may mimic those of angina pectoris or of other intraabdominal disease such as cholelithiasis, peptic ulcer or diffuse esophagospasm, and sliding hiatal hernia should be looked for in the diagnostic work-up of these patients. In some cases, also, it may coexist with any one or more of these conditions, and the diagnostic investigation should include a special effort to pinpoint the exact role of the hernia in the overall clinical picture.

DIAGNOSIS

The diagnosis is usually made by radiographic means with special maneuvers to assess reflux and the presence of ring-like constrictions of the lower esophagus (Schatzki ring). Cinefluorography is helpful. Esophagoscopy with the use of a malleable fiberoptic esophagoscope should be carried out in the awake patient; it is essential to the assessment of esophagitis and of any shortening of the esophagus and to the diagnosis of coincidental malignancy or other disease. Evaluation of the esophagitis plays a major role in determining the need for surgical treatment. When the clinical picture is obscured by the concomitant presence of other conditions, additional studies (such as esophageal motility studies, measurement of transmucosal electrical potential to determine the location of the gastroesophageal mucosal junction, the determination of esophageal pH by pH electrode and perfusion of the lower esophagus with 0.1 N HCl) may be useful diagnostic tests in detecting and determining the significance of reflux and evaluating its role in the production of symptoms.

TREATMENT OF SLIDING ESOPHAGEAL HIATAL HERNIA

In the absence of symptoms, no treatment is indicated for uncomplicated sliding esophageal hiatal hernia. Medical treatment is generally indicated for patients with mild or transient symptoms in whom esophagitis is absent or mild (hyperemic and edematous mucosa, but no ulceration) and in the few patients who have sig-

nificant symptoms in whom operation is contraindicated or refused.

Medical treatment is essentially symptomatic, aiming at reducing reflux and minimizing the irritating effects of gastric secretions, and consists of an intense program of postural and dietary control and antacids. Weight reduction plays an important part in the treatment of many cases by reducing intraabdominal pressure and reflux. An adequate course of medical treatment should be rigidly observed for at least 12 months in patients in whom esophagitis is absent or mild. Many such patients respond favorably to this treatment. Surgical treatment in these cases is considered if such medical treatment fails to relieve symptoms and restore the patients pleasure in eating and drinking.

INDICATIONS FOR OPERATION

The selection of cases for any surgical procedure is critical in assessing the results of that procedure. Only those symptoms and complications caused by hiatal hernia can be eliminated by surgical treatment of the hiatal hernia. This emphasizes the need to determine that the patient's clinical manifestations and symptoms are due to the existence of sliding hiatal hernia or gastroesophageal reflux or both. Having established this, the three basic indications for surgical treatment in adult patients are (1) the presence of reflux esophagitis greater than Grade I in severity; (2) the presence or threat of other serious complications, such as recurring aspiration pneumonitis; and (3) the severity of the patient's symptoms.

If Grade II esophagitis (hyperemic and edematous mucosa with superficial ulceration and membrane formation) is observed on esophagoscopy, operation is indicated. This is a matter of relative urgency, as the results of medical treatment in this group are rather disappointing; mucosal ulceration is the precursor to irreparable inflammatory damage to the esophagus. Delay in controlling gastroesophageal reflux at this state may result in missing the opportunity of relieving and correcting this situation by a relatively simple repair of the hiatal hernia. It should be remembered that this stage in the natural history of esophagitis may be reached in the absence of any severe pain or subjective distress to the patient, particularly when the hiatal hernia is large. Hence, there is an obligation to esophagoscope every patient who has even mild, but typical, symptoms of gastroesophageal reflux. Esophagoscopy is the simplest and most

New approaches and techniques for surgical repair of this commonplace problem have focused attention on the shortcomings of corrective procedures devised during the past 30 years. The authors discuss the evolution of a surgical procedure which is gaining wide acceptance and whose long-term results have changed the concept of intractability in this disease. They illustrate the new procedure with case reports from their own experience. Dr. Geha is Assistant Professor of Surgery, Washington University School of Medicine and Assistant Director, Department of Surgery, and Director, Division of Thoracic and Cardiovascular Surgery and of Surgical Research at The Jewish Hospital of St. Louis. Dr. Baue is Edison Professor of Surgery at the School of Medicine and Director, Department of Surgery at the Hospital.

accurate way of detecting esophagitis before it causes fibrosis and subsequent stenosis.

Severe pulmonary inflammatory reaction due to aspiration pneumonitis resulting from inhalation of gastric contents is being recognized more frequently as a complication of hiatal hernia with reflux; it may lead to pulmonary fibrosis or necrosis and abscess formation and constitutes a definite and also rather urgent indication for surgical control of reflux.

Intractability and difficulty in controlling the patient's symptoms by medical management as an indication for operation depends on the individual patient as well as on the results to be expected from surgical therapy. It is to be remembered that medical treatment is largely symptomatic and palliative and will have to be continued for very long periods of time, if not indefinitely in many patients in order to control symptoms. The willingness of the patient to continue such a mode of therapy will vary from individual to individual. The patient himself can be the final arbiter in this situation, provided conservative therapy does not appear to subject him to the risk of further complications. Insistence on continuing medical treatment will be largely dependent on the results that can be expected from surgical repair. The concept of intractability in this condition has become modified by the results of the Belsey-type of repair, as will be discussed and illustrated later.

Hiatal hernia is not rare in childhood, and

physical signs are more important than symptoms in this age group, as a child may be in obvious distress but incapable of complaining of specific symptoms. Documentation of esophagitis in children constitutes an absolute indication for surgical treatment as the progress of esophagitis to fibrosis and stenosis occurs with remarkable rapidity.¹⁷

SURGICAL TREATMENTS

The success of surgical treatment depends on complete and lasting relief of symptoms, prevention or elimination of complications and a negligible mortality and morbidity rate, and the introduction of no new symptoms as a result of the procedure. In a patient with a sliding hernia and reflux, the inherent capabilities of the intrinsic sphincter, if restored to its normal position by reduction of the hernia, are not known. In addition, an incompetent sphincter with reflux, but without a hernia, cannot be corrected by this means. This has led Belsey and Baue and their associates^{4, 5, 17-19} to develop a procedure designed to prevent reflux and esophagitis by reduction of the hernia and maintenance of the reduction, restoration of the intrinsic sphincter to its normal position below and within the hiatus of the diaphragm and overcorrection of the normal spatial relationships of the esophagus, stomach and diaphragm. In this way, a weak intrinsic sphincter could be assisted in maintaining competence and, as has been shown in the experimental laboratory, an absent or irreversibly incompetent sphincter could be replaced by such a valve-type mechanism.¹⁸ This procedure has been tested over the last ten years with marked improvement in results and has been adopted by many centers as the method of choice in the surgical treatment of hiatal hernia.^{4, 5, 16, 17, 19, 20} Our combined personal experience with this method now exceeds 750 cases.

The preferred method of approach is through a posterolateral thoracotomy incision on the left side, entering the pleural cavity through the sixth interspace.¹⁹ The essential features of the operation include (1) complete mobilization of the esophagogastric junction of cardia—it is not possible to reduce the hernia fully without this maneuver; (2) restoration of an acute esophagogastric angle by plication of the stomach onto the esophagus; (3) restoration of an abdominal segment of esophagus; (4) fixation of the gastroesophageal junction below the diaphragm and within the abdomen; (5) snug closure of the esophageal hiatus of the di-

aphragm behind the esophagus by approximation of the separated right crus. These features and the final anatomic result are illustrated in Fig. 1 and Fig. 2.

If reduction cannot be accomplished easily because of fibrosis and shortening of the esophagus, the repair will be jeopardized.²¹ Other approaches, such as resection, may then be indicated. The complete repair will reveal an intra-abdominal segment of 3 cm to 4 cm of esophagus, a substantial posterior buttress, an intact intrinsic sphincter at the cardia, intact vagus nerves, an acute esophagogastric angle and a sling of functioning right crural muscle embracing the lower esophagus above the reconstructed cardia.

RESULTS OF SURGICAL CORRECTION

Evaluation of this procedure by experimental and clinical studies of esophageal physiology and by careful clinical follow-up of our series and several others^{5, 16, 17, 19, 20} confirms that esophageal reflux is effectively prevented. Patients with

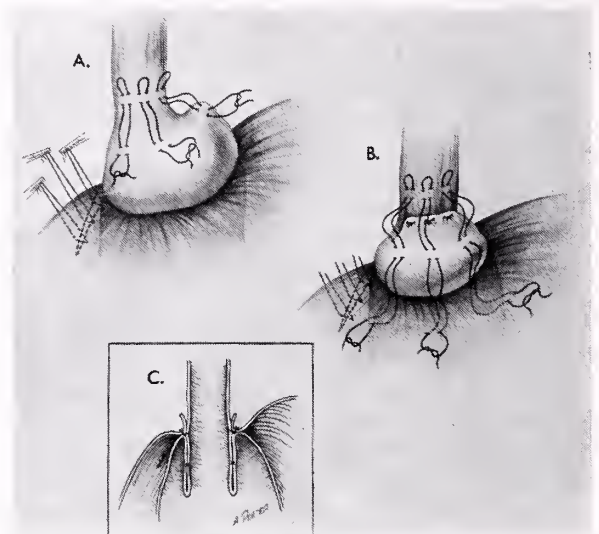


Fig. 1 Steps in the repair of sliding hiatal hernia by the Belsey technique: A. A row of stout 0 silk sutures (held by clamps) have been passed through the two halves of the right crus posteriorly, and the fundus of the stomach is plicated onto the lower esophagus by equidistant mattress sutures to restore an acute esophagogastric angle. B. The second row of mattress sutures extends the acute esophagogastric angle and restores a subdiaphragmatic intraabdominal segment of esophagus. C. Diagrammatic illustration of the completed repair; the intraabdominal terminal esophagus, with the acute esophagogastric angle, rests against the solid buttress produced by broad approximation of the right diaphragmatic crus.



Fig. 2 Postoperative esophagogram after Belsey repair of sliding hiatal hernia; the intraabdominal segment of esophagus, partly surrounded by gastric fundus, is seen below the diaphragmatic hiatus.

a feeble sphincter and esophagitis preoperatively are demonstrated to acquire normal sphincter function after reduction of the hernia and overcorrection of the mechanical factors which support the sphincteric mechanism. The mortality rate of the procedure as well as the pleural, pulmonary, and chest wall complications are no greater than for other types of transthoracic hernial repairs. With proper selection of the patient, careful intraoperative judgment as to feasibility of the repair and increased technical experience of the surgeon, permanent reduction of the hernia and restoration of cardioesophageal competence can be expected in more than 95% of the cases.¹⁹

The following examples from our own experience at the Jewish Hospital of St. Louis illustrate the approach to the problems of sliding hiatal hernia and the indications and results of this operative procedure.

CASE REPORTS

Case # 1. A 38-year-old company executive was admitted to the hospital because of indigestion, belching and heartburn of three years' duration. The

symptoms were aggravated by spicy foods and relieved by milk and antacids. During the last two months, he had been experiencing a sticky sensation upon swallowing. Physical examination was not remarkable. X-ray studies revealed the presence of a small hiatal hernia, free gastroesophageal reflux and a Schatzki ring (Fig. 3). Because of the long history of reflux with development of a fibrotic ring in the lower esophagus, operation was performed on Dec. 12, 1968. These findings were confirmed and the stomach, which had been pulled through the hiatus into the chest, was opened and the Schatzki ring was excised submucosally and the mucosa reapproximated. A Belsey-type repair of the hiatal hernia was carried out.

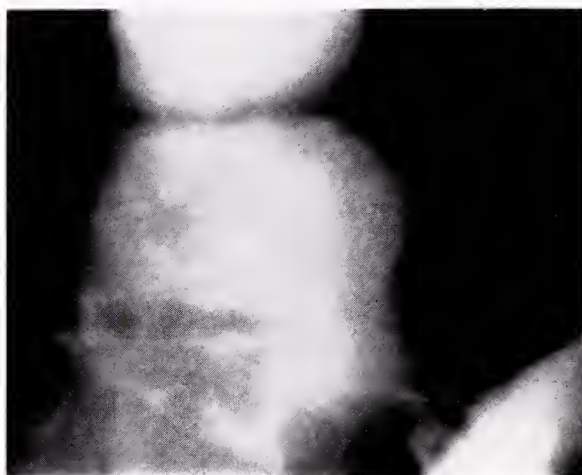


Fig. 3 Case # 1 Preoperative barium study of esophagus and stomach shows sliding hiatal hernia with ring-like constriction of the lower esophagus (Schatzki ring).

Follow-up revealed return of normal esophagogastric function with total absence of reflux. The patient became entirely asymptomatic and was able to enjoy eating and drinking with no further difficulty.

Case # 2. A 35-year-old mechanic was admitted with a history of belching for many years. He became nauseated very easily and vomited frequently, particularly after meals. A sliding hiatal hernia had been demonstrated on gastrointestinal series six years prior to admission and had been repaired through a left thoracotomy in another hospital four years later. However, his symptoms persisted after the operation, and he also complained of constant pain in the epigastrium and occasionally in the right upper quadrant. In the last year, he had four episodes of pneumonia. His physical examination was unremarkable except for the scar of his previous thoracotomy. X-ray studies revealed several small nonopaque stones in the gallbladder, and studies of the esophagus and stomach revealed free gastroesophageal reflux and a patulous cardia with no evi-

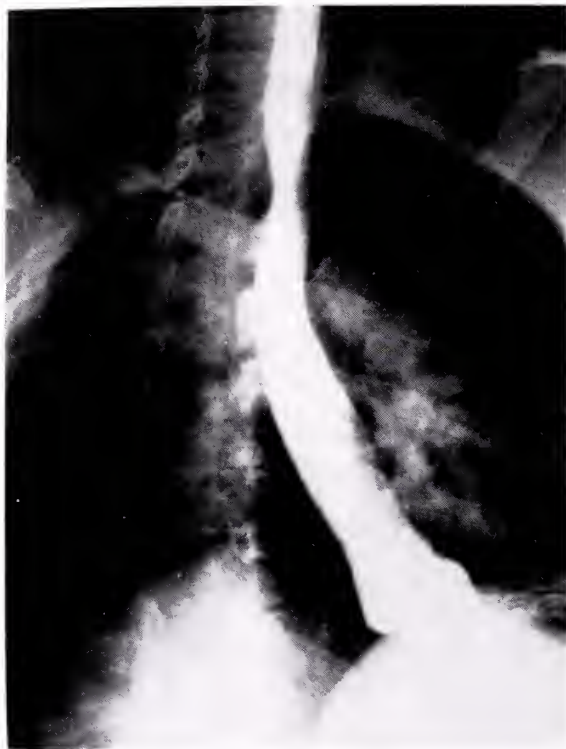


Fig. 4 Case # 2 Preoperative esophagogram shows widely patulous cardia with free reflux and no anatomical recurrence of the hiatal hernia which had been repaired through a thoracic approach two years earlier.

dence of recurrence of the hiatal hernia (Fig. 4). Because of the disabling massive esophagogastric incompetence and the development of repeated pneumonitis, operation was performed on Jan. 20, 1969. The hiatal hernia appeared to have been repaired anatomically, but the esophageal hiatus was about 5 cm in diameter and the gastroesophageal junction was freely patulous. This was freed completely, and a Belsey-type hiatal hernia repair was carried out. No attempt was made to deal with the cholelithiasis at that time and it was elected to treat it separately later on.

Postoperatively, his symptoms of reflux esophagitis abated completely. However, two months after his hernial repair, he developed acute cholecystitis which required cholecystectomy. He remains free of symptoms 15 months after his operation and has had no pneumonia, dysphagia or vomiting.

Case # 3. A 54-year-old white woman, a laboratory technician, was admitted to the hospital because of a very long history of pain and heartburn following meals, occasionally relieved by antacids. She had had a cholecystectomy and a partial gastrectomy 12 and seven years prior to admission respectively, both in an attempt to control her symptoms, but to no avail. An abdominal repair of her hiatal hernia and bilateral vagotomy were performed elsewhere three years before this admission, but the symptoms persisted. Physical examination revealed



Fig. 5 Case # 3 Preoperative study of the esophagus and stomach shows recurrent sliding hernia of the residual gastric pouch; a subtotal gastrectomy and a transabdominal hiatal repair had been performed previously. The patient had moderately severe esophagitis and free gastroesophageal reflux.

only the scars of the previous operations in a thin, undernourished woman. X-ray studies of her esophagus and stomach revealed a residual gastric pouch about one third the size of the stomach and containing a polyp, and a recurrent hiatal hernia with severe reflux esophagitis (Fig. 5). Esophagoscopy revealed Grade II-III esophagitis. Because of the severe reflux and the advancing degree of peptic esophagitis constituting an urgent situation, operation was performed through the left chest on March 14, 1969. The recurrent sliding esophageal hiatal hernia was encountered, and the esophagus was found to be somewhat thickened but still fairly mobile. It was possible to mobilize the gastroesophageal junction and the lower esophagus and to achieve a Belsey-type of hernial repair following excision of the gastric polyp.

Postoperative follow-up revealed some residual dysphagia in the first few months after operation, which was related to the presence of a rather advanced degree of esophagitis and some esophageal stenosis. This responded very well to repeated dilations, and she became entirely asymptomatic by the fourth postoperative month. She remains asymptomatic and has been able to resume her work with no difficulty.

Case # 4. A 27-year-old Negro man, a laborer,

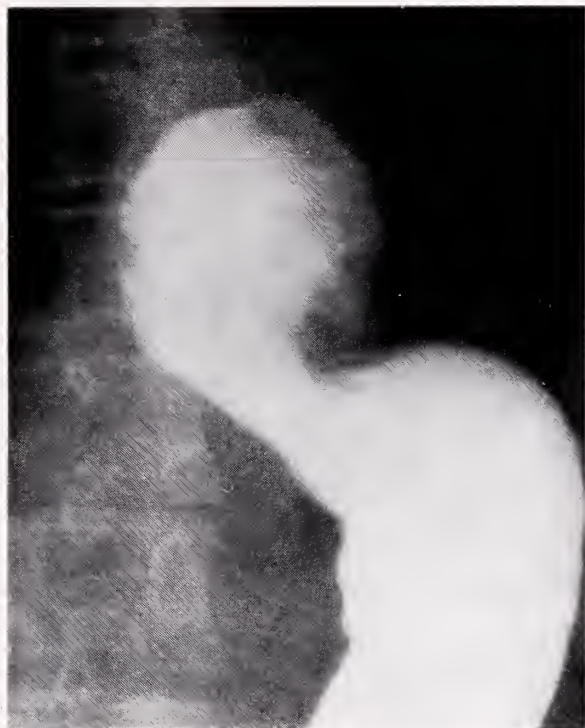


Fig. 6 Case # 4 Preoperative study shows sliding hiatal hernia with an intrathoracic proximal portion of stomach which has followed the cephalad migration of the esophagogastric junction.

was admitted to the hospital because of a one-year history of retrosternal burning and pain radiating to the back. A sliding hiatal hernia had been demonstrated on radiographic studies a year prior to admission during a work-up for an episode of pneumonia. There was no history of dysphagia. His physical examination was essentially negative. X-ray studies of his esophagus and stomach revealed the presence of a sliding esophageal hiatal hernia with a moderate degree of gastroesophageal reflux (Fig. 6). No significant reflux esophagitis was demonstrated. X-rays of his chest revealed a residual wedge-shaped density in the left lower lung field. In view of the likelihood of the pneumonia being secondary to reflux and of the symptoms interfering with his work, a transthoracic Belsey hiatus hernia repair was carried out on Oct. 28, 1969.

Postoperative x-rays revealed a competent gastroesophageal junction and the absence of reflux. He remains entirely asymptomatic and has been free of pain and discomfort.

DISCUSSION

These four case reports illustrate the variety of symptoms under which a sliding hiatal hernia could present, as well as the complications of this condition, ranging from the development of a Schatzki ring to fibrosis and stenosis of the lower esophagus, and the occurrence of

respiratory complications. They also illustrate the fact that simple anatomical repair of a sliding hiatal hernia does not abolish gastroesophageal reflux and its complications and that acid-reducing procedures on the stomach do not prevent reflux esophagitis and stenosis. The only rational approach to the treatment of this condition is through understanding the pathophysiology of reflux and aiming at restoration of esophagogastric competence and prevention of further reflux.

The high recurrence rate and less than satisfactory results of the several corrective procedures that have been devised in the past has resulted in a state of confusion regarding the indications for surgery in the presence of an hiatal hernia. As a result of this confusion as to which of these patients who have hiatal hernia should undergo surgery, many gastroenterologists and internists have been reluctant in recommending operative intervention at the proper time and have been treating all manner of esophagitis and hiatal hernia medically.

Such confusion and uncertainty, justified by the relatively poor results of the old procedures, has been clarified by the long-term follow-up analyses of patients treated with the procedure described here, as well as physiologic studies in these patients postoperatively. The Belsey repair of sliding hiatal hernia has resulted in clear definition of the indications for surgical treatment and has modified the outlook regarding intractability in this disease. Patients with reflux esophagitis of greater than Grade I severity or with serious complications of esophagitis should be advised to have repair of the hernia as soon as possible before the damage becomes irreversible and necessitates a more serious and extensive procedure to control the symptoms. In the absence of esophagitis or in the presence of Grade I esophagitis, patients are given a trial of medical treatment for a full year. The low recurrence rate and excellent long-term results of the Belsey procedure offer the clinician a very satisfactory alternative when the patient's symptoms persist after this trial of medical therapy or in the presence of socioeconomic or other factors which prevent the patient with little or no esophagitis from adhering to a strict medical regimen.

The relative and absolute indications of intractability are given in Table 1. The final arbiter for the relative indications of intractability must be the consumer—the patient. Patients having the above-described procedure for reflux are practically always happy that they have had

TABLE 1
SLIDING HIATAL HERNIA

Medical Therapy	Intractability—Operation Indicated	
	RELATIVE	ABSOLUTE
Mild to moderate symptoms with only Grade I esophagitis and symptoms relieved by therapy.	Symptoms not relieved by medical therapy Limitations of eating and drinking which the patient finds annoying Continued medical therapy needed which the patient finds annoying Patients in whom a rigid program of management is difficult Presence of a Schatzki ring with intermittent dysphagia Chest pain resembling angina pectoris	Dysphagia Esophageal narrowing by gastrointestinal series Bleeding and anemia Respiratory complications Esophagitis, Grade II or greater Interference with work—cannot bend over or stoop Stricture (someone waited too long) Interference with sleep Children

it done. They awaken in the recovery room, lying flat, and know immediately that their reflux is gone. They find a new freedom in eating and drinking what they wish, they can sleep flat in bed and do not require medications. They often ask why this operation wasn't suggested earlier. Obviously, the very elderly or poor-risk patient with mild to moderate symptoms would not be subjected to a thoracic repair. However, often we see aged patients with significant symptoms who have had difficulty for many years. They may have been allowed to reach an inoperable stage when they should have had operative repair when they were younger and in otherwise good health.

The absolute indications of intractability require some explanation. One of the purposes of operative repair is to prevent the development of a stricture. A stricture is *prima facie* evidence of procrastination by the patient or physician or both. Patients with Grade II or greater esophagitis will often develop a stricture no matter how they are managed medically, and they should have an operation. This is particularly urgent if they develop any dysphagia or if esophageal narrowing is evidenced by barium swallow. If reflux interferes with work which requires stooping or bending over, operation is needed. Respiratory complications from reflux and aspiration, usually occurring during sleep, require operation. Bleeding and anemia, although uncommon with a sliding hernia, can be prevented from recurring by operation. The size of the hernia is not a factor in intractability. Often the smallest hernias will have the most severe symptoms.

SUMMARY

The basic cause of symptoms and complications from sliding hiatal hernia is gastroesophageal incompetence with reflux of acid-peptic gastric secretions into the esophagus, production of esophagitis and the threat of stricture. The intrinsic physiologic sphincter at the lower end of the esophagus is the most important single component of the esophagogastric mechanism preventing reflux of gastric contents into the esophagus. With a sliding hiatal hernia, this intrinsic sphincter is less effective and may not be able to prevent reflux. Repair of the hernia, with overcorrection of the mechanical factors which support the intrinsic sphincter and creation of an intraabdominal segment of esophagus, according to the method of Belsey, will abolish reflux and permanently restore competence to a weak or incompetent sphincter in about 95% of the cases.

The effectiveness of this procedure now makes it reasonable to recommend operation for patients with findings of esophagitis or bothersome symptoms or both before they develop irreversible changes or undergo a prolonged period of suffering. Thus, intractability has been redefined by an operation which eliminates reflux, has a low morbidity and mortality and a low rate of recurrence.

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New Preventive Treatment

(Continued from page 34)

up as the usual tender eczematous reaction while the patient uses 5-FU, thereby greatly increasing the swelling. Should a reaction occur, we often suggest to the patients that they treat a smaller area at a time or reduce the frequency of application. Occasionally, we must use topical anti-inflammatory medications, wet dressings and even antibiotics. Extreme reactions are rare.

Some precautions must be routine, as follows:

1. Avoid getting the substance into the eyes.
2. Rub in the medicine thoroughly with an applicator or with plastic gloves.
3. Avoid direct sunlight while under treatment because the effects are potentiated by light.
4. The physician must advise the patient of the possibility of very extensive edema and unusual pain.

In association with this paper, arrangements have been made for up-to-date telephone consultation. By dialing the number, 314-881-2678, physicians can obtain a three-minute résumé of the use and complications of this drug as noted in practice by Missouri physicians. In addition, the telephone consultation program will consist of an answering service for questions that physi-

cians might entertain concerning the use of this new drug. By dialing the number 314-442-5111, Extension 280, a question can be submitted and an answer to this will be returned to the physician in writing. The physician also may call the authors directly. We intend after an approximate one-month run of the initial telephone introductory consultation to follow up with a three-minute consultation covering the experiences and pertinent or most commonly-asked questions by physicians throughout the state. We feel that through this program, we can share the experiences of the many physicians in the state with this new drug which promises to be an exceptional asset in the treatment of the severe skin damage from sun exposure in rural Missouri.

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Special X-Ray Exhibit

SIDNEY RUBIN, M.D., RODGER LAMBIE, M.D. and
EDWIN HERMAN, M.D., *Kansas City*

Radiologic Problem Cases

This is the first in a series of articles presenting unusual radiologic problem cases which the authors believe will be both interesting and educational for the practicing physician. Drs. Rubin, Lambie and Herman are from the Department of Radiology, Menorah Medical Center. They were assisted by Frank A. Mantz, M.D., pathologist.

A 31-YEAR-OLD-WHITE woman was admitted to the hospital complaining of abdominal pain and nausea of five days' duration. She had noted a weight gain of 15 lb, associated with an increase in her abdominal girth.

Past History: Noncontributory.

Physical Examination: Her temperature was 98.6 F; pulse rate, 84 beats per minute; respiration rate, 20 per minute; blood pressure, 130/80. The abdomen was distended with ascitic fluid which produced a shifting dullness. The bowel sounds were normal. There was a tender, palpable mass in the right lower abdomen just contiguous to the midline. Pelvic examination revealed no presumptive signs of pregnancy or adnexal masses. The remainder of the examination was not significant or contributory.

Laboratory Data: Laboratory studies disclosed the following values: hemoglobin, 12.2 gm/100 cc; hematocrit 35%; WBC's, 7,100 with 54% polys, 14% stabs, 1% eos, 27% lymphs, and 4% monos. Urine analysis: pH 6, sp. gr. 1.029, protein 1+, acetone and sugar were not found and microscopic was negative. The urinary chorionic gonadotropin test for pregnancy was negative. The SMA-12/60 revealed a normal serum calcium of 8.5 mg/100 ml with an elevated uric acid of 8.5 mg/100 ml. The BUN was 8 mg/100 ml; total protein, 5.9 gm/100 ml; albumin, 3 gm/100 ml; LDH was markedly increased and was deflected off the recording chart at 600 Mu/ml. The SGOT was 105, but the

inorganic phosphorus, glucose, cholesterol, total bilirubin and alkaline phosphatase values were normal. Creatinine and electrolytes were within normal limits. SGOT was 19, prothrombin time was 33 seconds and the control was 13.5 seconds. Bleeding time was 3 minutes 52 seconds. The amylase was 56 units.

Immunodiffusion—lgA	380	(N = 60–330)
lgG	1400	(N = 570–1920)
lgM	47	(N = 47–147)

EKG showed nonspecific ST-T variations. A liver scan was normal.

X-ray Findings: The terminal ileum was narrowed, with loss of mucosal pattern; there was a constant deformity of the ileum 6 inches proximal to the ileocolic junction and a widened and irregular lumen was evident, suggesting a giant ulcer of the ileum (Figs. 1 and 2).

Differential Diagnosis: The differential diagnosis included the following:

1. Regional ileitis
2. Tuberculous ileitis and peritonitis
3. Lymphosarcoma
4. Metastatic disease (involving the ileum and peritoneum)

Radiological Diagnosis: Preoperatively, lymphosarcoma was favored because of the enlarging lumen with the giant ulceration. Infiltrative cells in the submucosa are most apt to produce an ulceration of the mucosa with replacement of the bowel. Regional ileitis constricts the lumen of the intestine with dilatation proximally. However, the dilatation is changeable since no replacement ulceration occurs. In addition, ascities is uncommon in Crohn's ileitis although it may exist in peritonitis and ileitis secondary to tuberculosis.

Radiological Diagnosis: Lymphosarcoma.

Exploratory Laparotomy: A large friable mass was found involving the ileum. The tumor practically replaced the normal mucosa and presented as a large ulcerated mass measuring 2 x 3 inches. Mesenteric lymph nodes were en-



Fig. 1 Internal study reveals narrowed terminal ileum with widened lumen approximately 6 inches from the valve.



Fig. 2 Constant widened lumen without any alteration suggests ulceration within ileum, additional to the string-like deformity distal.

larged, and there were omental masses present.

Surgical Pathological Report: Microscopic: Within the ileum there are areas of total obliteration of the mural architecture by bizarre lymphocytoid cells. The bowel was disrupted by an ulceration measuring 4 cm x 2 cm. This ulcer was 8 cm from the ileocecal valve. Lymph nodes were involved with lymphomatous changes.

Pathological Diagnosis: Malignant lymphoma,

lymphoblastic type, involving omentum, ileum, ileocecal valve, appendix and mesenteric lymph-nodes. Mucosal ulceration and mural necrosis of the ileum due to infiltrating lymphoblastic lymphoma.

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Albert C. Esposito, M.D., Huntington, W. Va., became the 66th president of the Southern Medical Association during its 64th Annual Meeting in Dallas recently. J. Hoyle Carlock, M.D., Ardmore, Okla., was named president-elect, while Edgar Boling, M.D., Atlanta, Ga., was elected first vice-president. Chairman of the Council for the coming year is William L. Macon, Jr., M.D., St. Louis, and Andrew M. Moore, M.D., Lexington, Ky., will serve as vice-chairman.

Paraneoplastic Syndromes of Bronchogenic Carcinoma

A Review

RECOGNITION OF extrapulmonary manifestations (paraneoplastic syndromes) of bronchogenic carcinoma is proving to be an important means of identifying patients with this neoplasm. Recently, increasing emphasis has been placed on searching for these syndromes to establish earlier identification and initiate treatment.

Such a patient presents himself with symptoms and findings resulting from pathophysiological causes other than direct anatomic interference. Metabolic, neuromuscular, osseous, cardiac or hematological disturbance may precede the classical pulmonary symptoms by months or may explain disturbed function or distressing symptoms which the anatomic location of the tumor cannot.

Fifty-eight patients with bronchogenic carcinoma and paraneoplastic syndromes were identified. These serve as the basis of this article.

METHODS AND MATERIALS

A prospective study was undertaken to evaluate all patients admitted to the Missouri State Sanatorium for a one-year period with infiltrations in their lungs or whose physical examination or questionnaire was suggestive of extrathoracic manifestations. Following the definite diagnosis of bronchogenic carcinoma, clinical and laboratory findings were rechecked and additional tests were performed for further evaluation of specific positive findings.

In their presentation of this review of the literature, the authors analyze 58 cases of bronchogenic carcinoma and paraneoplastic syndromes. The authors are from the Missouri State Sanatorium where Doctor Reddy is Medical Resident, Doctor Atay is Staff Physician and Doctor Christianson is Chief of Medicine. Doctors Ertan and Kozdereli are former Staff Physicians at the Sanatorium.

Glucose tolerance tests were done in cases where fasting blood sugar was elevated (110 mgm/ml or more). Fajan-Conn and the United States Public Health Service criteria were applied for the interpretation of glucose tolerance tests, as follows:

Fajans-Conn Criteria

One hour—160 mgm/100 ml or more
Two hours—120 mgm/100 ml or more

U.S.P.H.S. Criteria

One hour—170 mgm/100 ml
Two hours—120 mgm/100 ml
Three hours—110 mgm/100 ml

Correction for age: 6 mgm-8 mgm for each decade of life after 40 years.

REVIEW OF LITERATURE AND ANALYSIS OF 58 CASES

Knowles and Smith¹ classified the paraneoplastic syndromes of bronchogenic carcinoma into five groups. All reported syndromes in the literature are listed under these five groups as shown in Table 1.

Metabolic Abnormalities

Wasting of the host is the most frequent metabolic abnormality associated with any malignant tumor. There were ten cases (17%) with a significant degree of wasting in our study of 58 cases (Table 2). Despite its important role in morbidity and mortality, the cause of this catabolic reaction is unexplained.

One of our patients had hypercalcemia and hypophosphatemia without roentgenographic evidence of bony metastasis.

Hypercalcemia is a frequent complication and usually occurs when there is diffuse metastatic involvement of the skeletal system; however, several cases of hypercalcemia in the absence of demonstrable osseous metastasis have been reported. Hypophosphatemia is frequently

TABLE 1

PARANEOPLASTIC SYNDROMES ASSOCIATED
WITH BRONCHOGENIC CARCINOMA

1. Metabolic abnormalities
 - Wasting of the host
 - Cushing's syndrome
 - Carcinoid syndrome
 - Excessive antidiuretic hormone
 - Hyperthyroidism
 - Hypercalcemia
 - Masculinizing syndrome
 - Feminizing syndrome
 - Abnormal carbohydrate metabolism
2. Neuromuscular abnormalities
 - Peripheral neuropathy
 - Sensory
 - Sensorimotor
 - Cortical cerebellar degeneration
 - Dementia & psychosis
 - Proximal myopathy
 - Myasthenia-like syndrome
 - Dermato & polymyositis
3. Connective tissue & osseous abnormalities
 - Clubbing
 - Hypertrophic osteoarthropathy
 - Scleroderma
 - Acanthosis nigricans
 - Erythema gyratum repens
4. Cardiac & vascular (endothelial) abnormalities
 - Arrhythmia
 - Migratory thrombophlebitis
 - Nonbacterial thrombotic endocarditis
5. Hematologic abnormalities
 - Anemia, leukocytosis, leukemoid reaction
 - Polycythemia
 - Thrombocytosis—thrombocytopenia
 - Fibrinolytic purpura
 - Cryofibrinogenemia & cryoglobulinemia
 - Coagulation defect

found together with hypercalcemia and alkaline phosphatase levels are usually normal. The exact mechanism of these changes in serum calcium and phosphorus has not yet been explained. However, a substance which resembles parathyroid hormone in its action has been isolated from the tumor tissues. It also has been suggested that the tumor may produce a vitamin D-like substance which increases the absorption of calcium from the intestinal tract. The removal of the tumor leads to a prompt return of serum calcium and phosphorus to normal levels.^{2, 3}

Feminizing syndrome (gynecomastia, high-pitched voice and atrophy of testicles) is one of

TABLE 2

TOTAL OF 58 CASES STUDIED FOR
PARANEOPLASTIC SYNDROMES OF
BRONCHOGENIC CARCINOMA
FROM JANUARY, 1968, THRU
JANUARY, 1969

<i>Paraneoplastic Syndromes</i>	<i>Total Number</i>	<i>% (Approximate)</i>
Smoking	58	100
Clubbing	35	60
Abnormal glucose tolerance test (diabetes-like disease)	35	60
Sinus tachycardia	30	51
Wasting	10	17
Anemia	8	14
Gynecomastia	4	7
Coagulation defect	3	5
Peripheral neuropathy	2	3
Migratory thrombophlebitis	2	3
Hypertrophic osteoarthropathy ..	1	1.7

the more common systemic manifestations of bronchogenic carcinoma. However, only four patients (7%) from 58 cases in our study had significant gynecomastia (Table 2). In two patients, 24-hour urinary excretion of total estrogens was markedly elevated. Urinary pituitary gonadotropin levels, however, were within low normal range. Gynecomastia usually clears on resection of the tumor.

Since the original report of spontaneous hyperglycemia in patients with cancer in 1885, the problem of the association of altered carbohydrate metabolism in cancer has generated a great deal of interest.

Following the establishment of the glucose tolerance curve, several studies have been done to determine the abnormal glucose tolerance test (diabetes-like disease) in bronchogenic carcinoma. Glicksman and Rawson⁴ stated that not only clinically manifest diabetes occurs more frequently in cancer patients, but that a subclinical or latent aberration in carbohydrate metabolism is more frequent as well. Enzymology of both tumor tissue and the host has been studied extensively and it is known that there is an abnormality in glycolytic processes. But, it is not known specifically where in this abnormality lies.^{5, 6}

More than one half of our patients, 35 (60%) had abnormal oral glucose tolerance tests, but none of these patients showed clinically overt diabetes. Twenty patients in this group had glucose tolerance tests repeated two weeks

following removal of the tumor; 13 (65%) showed normal results and seven (35%) failed to reveal significant change (Table 2).

Neuromuscular Abnormalities

Neuromuscular abnormalities have received increased attention during the past 20 years.⁷ Peripheral neuropathy may be pure sensory or mixed motor sensory. Sensory neuropathy is regarded as particularly suggestive of bronchogenic carcinoma. Dominant features are severe and persistent paresthesias and pains in the limbs, and they eventually lead to loss of all sensory modalities with sensory ataxia but with little muscle weakness. Pathologically, there is degeneration of the posterior root ganglion.⁸ Neuropathy of the mixed type is a common carcinomatous neuropathy in which muscle weakness is due to degeneration of anterior horn cells or motor nuclei in the brain stem. Spontaneous remissions are frequent; however, removal of the tumor may not reverse the nervous system changes.⁹ Two of our patients had pure sensory changes in the lower extremities and one patient had progressive sensory and motor changes with D-5 sensory level and extreme weakness of his lower extremities (Table 2).

Connective Tissue and Osseous Abnormalities

Clubbing associated with bronchogenic carcinoma is often painful, develops rapidly and disappears after removal of the tumor.

Thirty-five patients (60%) in our study group had significant degrees of clubbing. Twenty (57%) of these were painful. The tumor was surgically removed only in 17, and in 11, clubbing disappeared after removal of the tumor. There was not adequate follow-up of six patients (Table 2).

Hypertrophic osteoarthropathy is characterized by the acute onset of deep-seated, burning bone pain aggravated by dependency of the limb and associated with tenderness over the affected bones. The picture of rheumatoid arthritis is often mimicked, e.g., symmetric migratory arthritis affecting the larger joints which manifest heat, redness, fibrositis and limitation of motion. Usually, the removal of the tumor results in striking relief of pain within 24 hours.^{10, 11}

We encountered one patient with this syndrome who presented himself with pulmonary infiltration and burning pain of the right tibia. Surgery was not done because of metastasis to the scalene node (Table 2).

Cardiac and Vascular (Endothelial)

Abnormalities

Arrhythmias (premature contractions, sinus tachycardia) may not be considered significant since they may be associated with numerous other debilitating disease entities. Thirty (51%) of our patients had a heart rate ranging from 110 to 140 beats per minute and a few of these were with occasional atrial and ventricular premature contractions (Table 2).

Nonbacterial thrombotic endocarditis is characterized by the formation of sterile verrucous lesions on the heart valves which are found most frequently on the mitral valve and may be associated with a variety of chronic debilitating diseases as well as bronchogenic carcinoma. Arterial embolization is a well established complication of this syndrome.^{12, 13}

The association of migratory thrombophlebitis and malignant disease is well known. This syndrome may precede clinical signs and symptoms of bronchogenic carcinoma by months. If pulmonary infarction occurs as a complication, the basic diagnosis may be obscured. Changes in venous and endocardial endothelium and the possible role of hypercoagulability of blood are yet to be explained. Medical management without surgery is usually ineffective, as it was with two (3%) of our patients who could not be operated upon because of metastasis (Table 2).

Hematologic Abnormalities

There are several sporadic reports of hematologic abnormalities with bronchogenic carcinoma. Eight (14%) patients in our study group had a mild degree of clinically asymptomatic unexplained anemia (Table 2). It is well known that simple chronic anemia (hemopathic hemolytic anemia), leukocytosis or leukemoid reactions are common with all wasting diseases.¹⁴

Activation of the plasma fibrinolytic system by a malignant tumor may result in fibrinogen depletion and cause hemorrhagic diathesis (fibrinolytic purpura). It is significant that not only the removal of tumor, but also irradiation and nitrogen mustard therapy brought the bleeding tendency under control in such patients.^{15, 16}

The release of tissue thromboplastin into blood from thromboplastin-rich lung tissue may result in overutilization of coagulation factors through widespread intravascular clotting.¹⁷ There has been no reported case of an isolated coagulation factor defect to date.

TABLE 3
PARANEOPLASTIC SYNDROMES AND CELL TYPE CORRELATION

Paraneoplastic Syndromes	Total No.	Cell Types of Bronchogenic Carcinoma in 58 Cases				
	58	SQUAMOUS 28 CASES 48%	ADENO- CARCINOMA 11 CASES 18%	OAT CELL (SMALL CELL) 6 CASES 10%	ALVEOLAR CELL 2 CASES 3%	UNDIFFER- ENTIATED 11 CASES 18%
Clubbing	35	17	5	4	2	7
Abnormal G.T.T. (diabetes- like disease)	35	17	8	2	1	7
Sinus tachycardia	30	15	5	4	1	5
Wasting	10	3	3	1	1	2
Anemia	8	4	2	1	1	
Gynecomastia	4	3		1		
Coagulation defect	3	1		1		1
Peripheral neuropathy	2		1	1		
Migratory thrombophlebitis	2		1			1
Hypertrophic osteoarthropathy	1		1			

We investigated three (5%) such cases in our study and found that one patient had a factor II, another factor VII and a third patient had factor X deficiency. Further studies revealed no liver pathology in these patients (Table 2).

CONCLUSIONS

Systemic manifestations without any demonstrable metastasis, physiological studies of patients and biochemical studies of tumor tissues strongly suggest that bronchogenic carcinoma is more than a simple derangement of local tissue growth.

The frequency of association of paraneoplastic syndromes with bronchogenic carcinoma varies a great deal, depending upon the specific syndromes. Hatch and Knudson¹⁸ reviewed 530 patients over a nine-year period and found 79 (about 15%) had paraneoplastic syndromes (exclusive of anemia) on admission. However, this was a retrospective study.

In our study of 58 cases (age group from 41 to 71 years), 48 (82%) patients (Table 2) had one or more of the syndromes listed in Table 1 exclusive of manifestations which may be associated with any chronic debilitating disease, e.g., wasting, anemia and sinus tachycardia. This high incidence may be due to screening of the patients for paraneoplastic syndromes on admission to the hospital.

It is of interest that some syndromes occur with certain malignant cell types of bronchogenic carcinoma. In our study, we could not demonstrate any specific correlation between the syndromes encountered in the study and the cell

types of tumors (Table 3). However, the syndromes which are usually associated with a certain cell type, e.g., carcinoid syndrome with carcinoid-type of bronchial adenoma or excessive secretion of ADH with "oat-cell" type carcinoma, were not found in our patients.

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JAMES O. REYNOLDS, JR., JAMES S. ROLOFF,
J. P. MARSHALL, II and WILLIAM V. MILLER, M.D., *Columbia*

Availability of Cadaver Kidney Donors

A Study of an Autopsy Series

RENAL TRANSPLANTATION has provided good health for extended periods to more than 3,000 patients with severe renal failure.¹ Unfortunately, there are still obstacles to kidney transplantation as a widely used means of therapy. One major problem is that the demand for suitable kidneys for transplantation far exceeds the present supply. This supply problem is due in great part to the confusion and disagreement over criteria determining an acceptable kidney donor and to problems in terminal management of these donors. After proper matching and preservation, cadaver donor kidneys have been found to have an acceptably high survival rate.^{2, 3} Therefore, we have studied an autopsy series at the University of Missouri Medical Center to determine the availability of suitable cadaver kidney donors. Additionally, we have consolidated criteria for the selections of kidneys for transplantation.

MATERIALS AND METHODS

Donor Criteria

The lower age limit for donors was arbitrarily set at 16 due to anticipated legal difficulty in receiving permission for donation, because kid-

neys from small children are technically difficult to transplant and because they may not be adequate to support adults. An upper age limit of 60 was arbitrarily picked because of the increasing incidence of vascular disease and nephrosclerosis with age. All malignant neoplasms, excepting those primary to the central nervous system, constitute an excluding factor because of possible growth and metastasis in the recipient. Any patient with severe infection, such as septicemia, severe bilateral pneumonia and peritonitis, must be excluded due to possible post-transplant infection in the recipient receiving immuno-suppressive drugs. All patients with significant renal disease are, of course, also excluded.⁶⁻¹²

Cadaver Evaluation

A series of 476 consecutive autopsies performed at the University of Missouri Medical Center between March, 1963 and April, 1965 was studied. For each patient, the age, race, sex and hospital service were recorded as well as major illness and cause of death as determined by study of the clinical history, laboratory values and autopsy findings of each patient. Particular attention was placed on the terminal event to evaluate the degree of potential anoxia and ischemia the kidney may have suffered.

Determination of Donor Acceptability

Based on the above information, the patients were then divided into three groups. They were classified as *not acceptable* if any of the excluding factors were present; *possibly acceptable* if there was absence of the major excluding factors, but some question regarding terminal anoxia or hypotension, severity of infection, damage to the kidneys, such as trauma, or if a restricted autopsy were performed; and *acceptable* if the donor met all the criteria and none of the above questions were raised.

RESULTS

Fig. 1 shows a large number of patients from

A review of nearly 500 patients coming to autopsy at the University of Missouri Medical Center indicates that 12% of the patients might have been organ donors for a renal transplant program. The authors discuss donor acceptability and show that it is now possible for the patient-care physicians in community hospitals to become part of the transplant team by helping to provide donor tissue. Mr. Reynolds, Mr. Roloff and Mr. Marshall were second-year medical students at the University of Missouri School of Medicine at the time this study was made. Doctor Miller is from the Department of Pathology at the School of Medicine.

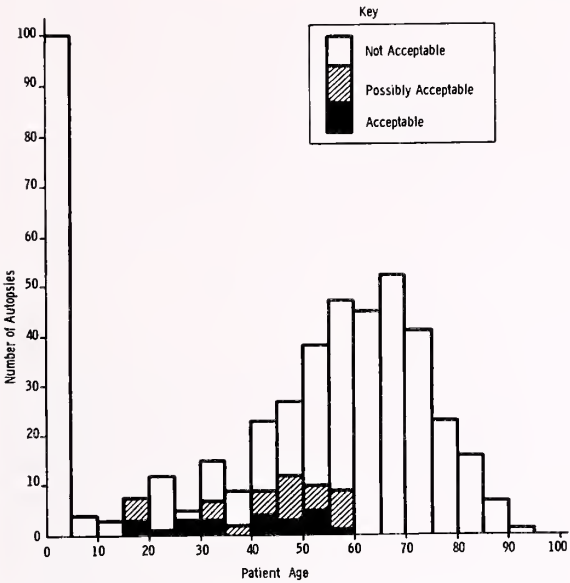


Fig. 1 Age distribution of patients coming to autopsy.

0 to 5 years old. This reflects a relatively large number of premature and stillborn infants. The majority of patients were 50 to 75 years old. The mean age of the total population studied was 50 to 60 years. The majority of acceptable and

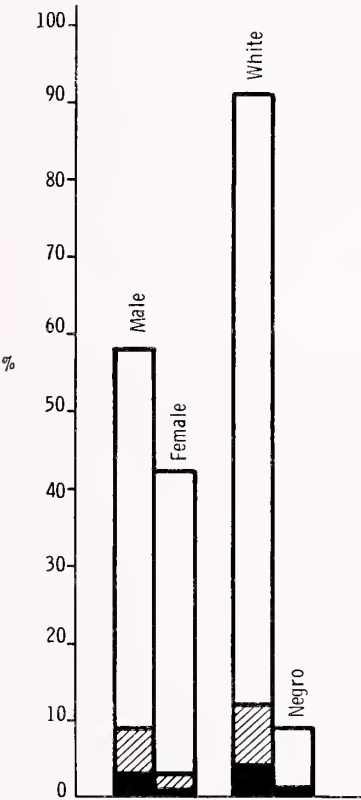


Fig. 2 Distribution of patients by sex and race.

possibly acceptable patients were 40 to 60 years old. The mean age for acceptable patients was 40 years and for possibly acceptable was 45 years. As seen in Fig. 2, there was a moderate male preponderance both in the total population studied and, also, in the number of "acceptables" and "possibly acceptables." Of the total population of 476 records studied, 23 or 4.9% were classified as acceptable and 38 or 7.9% were possibly acceptable for a total of 12.8% of the population as acceptable or possibly acceptable donors.

Fig. 3 shows the service to which the patients studied were admitted. As seen, nearly all ac-

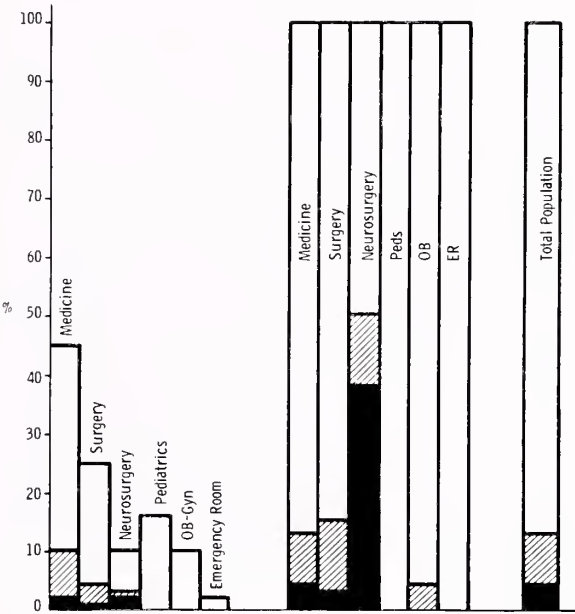


Fig. 3 Distribution of patients by clinical service. Note that the neurosurgery service provided the highest percentage candidates, even though that service had relatively few deaths.

ceptable and possibly acceptable donors were on the medicine, surgical or neurosurgical services.

There were no pediatric patients, of course, since all individuals over 16 years of age are admitted to the medicine service. The second part of the table shows that the percentage of acceptable patients is much higher on neurosurgery as compared to the other services. This reflects the higher number of acceptable donors in patients involving central nervous system problems.

Table 1 shows that while trauma provided the lowest percentage of autopsies, it provided the highest percentage of acceptable and possibly acceptable donors. Central nervous system dis-

TABLE 1

DISTRIBUTION OF MAJOR DISEASES IN PATIENTS WITHOUT OTHER ILLNESSES OF EXCLUSION

Disease	% of All Autopsies	% Acceptable	% Possible Acceptable	% Not Acceptable
Trauma	2.5	42	25	33
CNS	6	33	11	56
Cardiovascular	18	6	18	76
Other	14	5	26	69

ease also comprises a small number of the total population studied but provides a large number of the acceptable and possibly acceptable donors. Thus, in proportion to their frequency in this series, trauma or central nervous system problems provide a much larger percentage of donors. It is of interest to note that only in trauma are greater than half of the number of cases which come to autopsy classified as potential donors.

For the exclusion principles set forth in this report, Table 2 indicates the percentage of patients studied who were excluded for each criterion. Renal disease comprised the largest excluding factor with age and neoplasm also contributing significantly.

Table 3 points out the percentage of patients within the acceptable age range who were excluded due to one or more disease processes. It again emphasizes renal disease and the combination of renal disease and infection as important excluding factors.

DISCUSSION

Several factors may bias this study. The University Medical Center has a unique patient population in that it is a referral center from physicians around the state. Because we may receive a higher than normal proportion of pa-

tients with cancer, chronic diseases or severe infections, it is possible that the percentage of donors in the general population is actually higher than found by this study. One of the best sources for donors is trauma victims, who were quite rare in our study.

The study of an autopsy series itself introduces certain biases. There are social and cultural factors which determine which patients will come to autopsy. This is reflected in the fact that a far smaller percentage of Negro patients came to autopsy than actually die here. Thus, it cannot be determined with certainty whether this autopsy series represents a random selection of patients from the total number of deaths. During this period of study, the autopsy series represented 63% of the deaths in this hospital.

By reviewing clinical and autopsy data rather than firsthand observations of the patients, the selection of donors was made arbitrarily without, in many instances, complete knowledge of terminal hypotension and renal ischemia. Nevertheless, we feel this study is a good estimate of the potentially available cadaver donors acceptable for kidney transplantation.

TABLE 2

DISTRIBUTION OF CRITERIA FOR EXCLUSION OF PATIENTS FROM KIDNEY DONATION

Criteria	% of Total Population
Neoplasm	24
Renal Disease	44
Infection	17
<16	24
Age >60	39

TABLE 3

EXCLUSION FACTORS OF UNACCEPTABLE PATIENTS WITHIN ACCEPTABLE AGE RANGE

Disease or Combination of Disease	% of Patients 16-60 yrs. old
Renal	36%
Neoplasm + Renal	7%
Renal + Infection	24%
Neoplasm	11%
Neoplasm + Infection	9%
Infection	9%
Neoplasm ± Renal + Infection	3%

Much has been written concerning various criteria for donor selection. Various studies differ, but after a review of the literature, the criteria used in this study were set forth. Parsons *et al*⁴ propose that the donor should be young, have no infection, no malignancy and no renal disease and death should not be preceded by prolonged anoxia or hypotension. Starzl *et al*⁵ reported good results using a kidney from a case of bacterial endocarditis and CNS infection. Other studies consistently point out renal disease, septicemia, severe hypotension and neoplasm as excluding factors.⁶⁻¹² Muiznieks *et al*¹¹ reported that neoplasm, other than primary to the CNS, could be transplanted to the recipient along with the transplanted kidney. In a study by Ende and Killen,¹² it was found that kidneys obtained from patients dying of cardiac and pulmonary disease withstand terminal anoxia as well as those from patients dying of trauma or neurologic disorders. Thus, these disease processes would not usually produce anoxia or ischemia of a degree to preclude transplantation. The age limits were arbitrarily picked, the lower limit of 16 due to possible legal entanglements and concern for surgical difficulty and the ability of these organs to adequately handle adult perfusion. The upper limit of 60 was established due to a reported higher failure of transplants.⁸

CONCLUSION

This study shows that patients dying of such common diseases as cardiovascular, respiratory and CNS disorders and many patients dying of trauma may provide a much-needed supply of

donor tissue for transplantation programs. Since kidneys may be stored in ice up to 12 hours while being transported to regional transplantation centers,⁹ the individual physician in private practice may be an important part of any transplantation program. By using the criteria set forth in this study, the clinician may be able to identify possible donors. He may be able then to manage these patients to prevent terminal ischemia and anoxia and, through communication with transplantation centers, become a vital part of the transplant team.

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The 23rd Annual Midwest Cancer Conference for physicians will be presented by the Kansas Division, Inc., American Cancer Society, at the Broadview Hotel in Wichita, Kan. on March 26-27, 1971. Theme of the meeting will be "The Physician Versus Cancer."

John S. Spratt, Jr., M.D., Director and Administrator, Ellis Fischel State Cancer Hospital, Columbia, is one of eight speakers who will appear. He will discuss "Carcinoma of the Breast—Its Management" at 11 AM and "The Small Cancer of the Bowel" at 3:15 PM on March 26.

The Medical and Scientific Committee of the Kansas Division of the ACS invites all physicians in the Midwest to attend this two-day graduate course on cancer. Registration is free. AAGP credit will be given.

Cholecystectomy in a Centenarian

Case Report

CHOLECYSTECTOMY carries a greater risk in older than in younger age groups. Several large series of cholecystectomies have been reported in the past with emphasis on mortality rates.¹ Glenn and Hays² reported in 1955 that below 50 years of age, the mortality rate is 0.6%, whereas from 50 to 64 years of age the rate increases to 2.5%. Above 65 years, the rate increases to 6.7%. When cholecystectomy is done in acute cholecystitis, the mortality rate is a formidable 10.7%.

In a report by Ibach³ in 1968, it is evident that emergency cholecystectomy in patients over 60 years of age carries an alarmingly high mortality rate even in our present time of improved patient care and antibiotic therapy. All cholecystectomies in the seventh decade carry a mortality rate of 1.3%; this increases to 3.7% in the eighth decade and 16.7% in the ninth decade. This paper presents a case report of acute cholecystitis in a centenarian.

CASE REPORT

The patient was born on Oct. 18, 1869. The date of his birth was verified by the Social Security system. He was born in Indiana. During his early adult years, he worked in the mines during the winter and on his farm during the summer. He moved to Missouri to live with one of his sons.

He was admitted to the Ellis Fischel State Cancer Hospital for a large basal cell carcinoma on the right side of his face, which was being treated with radiotherapy. This elderly gentleman had been ambulatory to a limited extent, but because of bilateral cataracts, he had to be guided. During his hospitalization, he was in bed most of the time.

On July 7, 1970, he was noted to have epigastric pains and nausea. On physical examination, he had

evidence of right upper quadrant abdominal pain. He was afebrile; laboratory data indicated no elevation of white cells. Liver function tests were within normal limits. An upper gastrointestinal series was normal and a gallbladder series indicated non-visualization of the gallbladder. Conservative treatment consisted of Donnatal medication with symptomatic relief.

On July 26, 1970, he began to develop low grade fever and showed increasing signs of nausea and right upper quadrant pain. The white blood cell count rose from 4,300/cu mm to 7,800/cu mm with a shift to the left. Electrocardiogram ruled out the possibility of myocardial infarction. Because of increasing signs of right upper quadrant pain, the patient was not given medication orally. Intravenous fluids were started and propantheline (Pro-Banthine) was administered. At the same time, tetracycline was started intravenously. A nasogastric tube was placed in the stomach and put on low intermittent suction.

On July 28, 1970, the urine output decreased markedly. Before increasing the intravenous fluids, a catheter was placed in the superior vena cava via the left external jugular vein. The central venous pressure was in the range of 6 cm to 10 cm of water. Intravenous digitalis followed by ethacrynic acid produced excellent urine output.

In spite of the conservative treatment, the patient became worse with spiking temperatures and elevated pulse. Abdominal examination showed severe right upper quadrant pain and abdominal guarding with absent bowel sounds. X-ray of the abdomen showed marked stasis of air in the right colon with an increased density in the subhepatic space.

On July 29, 1970, it became apparent that the patient was getting worse with conservative treatment. Under general anesthesia, a cholecystectomy was performed through a subcostal incision. The gallbladder appeared acutely inflamed. The colon was dilated around the hepatic flexure without evidence of distal obstructions. There was no other intra-abdominal pathology. The gallbladder was removed without complications. A Penrose drain was placed in the subhepatic space and removed in four days.

Postoperatively, the patient had two days of mental confusion. On the fourth day, however, he was taking fluids orally. He was discharged to a nursing home on the tenth postoperative day.

Plans were made to readmit the patient in four

Although cholecystectomy patients over 60 years of age have a high mortality rate, this patient, who was a centenarian, was successfully treated for acute cholecystitis with this procedure. Dr. Schokker is Chief Resident, Department of Surgery at Ellis Fischel State Cancer Hospital and the University of Missouri School of Medicine.

weeks for continuation of radiotherapy for his facial lesion. However, his children refused to bring him back since the lesion on his face was hardly visible and the patient was not suffering. The pathological report indicated acute acalculous cholecystitis.

DISCUSSION

Most surgeons are justifiably reluctant to perform any major procedure on old and feeble patients. One is, therefore, inclined to be conservative. In our case, however, it was obvious that conservative treatment did not relieve the symptoms of acute cholecystitis.

With appropriate preoperative preparation, one can accomplish much. The electrocardiogram, although not showing acute changes, did indicate old myocardial injury. Along with this fact was the decreased urine output, which also could be explained by relative hemoconcentration, and we elected to digitalize this patient prior to surgery with excellent clinical results.

A valuable adjunct is the central venous pressure monitoring, which was conducted throughout the surgical procedure and for 24 hours

thereafter. This is simple to start and adds only a minimal amount of work to the nurses' load.

Another consideration is to hold the anesthesia time to a minimum, quickly enter the abdomen, perform a 60-second exploration and then do only the essential surgery.

SUMMARY

A successful case of a cholecystectomy in a centenarian is described. Emphasis is placed on careful details of preoperative preparation.

(*Note:* Word has been received that this patient was in a hospital awaiting admission to a nursing home. He apparently was at complete bedrest, but had no gastric intestinal complaints. Apparently on Oct. 3, 1970, he died of cerebral embolism.)

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The Missouri State Medical Association, in cooperation with the AMA, is co-sponsoring a program of seminars and a lecture in the medical sciences at six universities in Missouri during the 1970-1971 academic year. The AMA Council on Foods and Nutrition initiated this program in the fall of 1964. It is being carried out on a regional basis with a total of 82 lectures being scheduled in the following 14 states: Connecticut, Delaware, Illinois, Indiana, Maine, Massachusetts, Michigan, Missouri, New Hampshire, New York, Ohio, Pennsylvania, Rhode Island and Vermont.

The purpose of the lecture is to inform students and faculty of recent developments and to stimulate interest in the medical sciences. The lecturers are on campus for the day to give undergraduate or graduate seminars and to meet informally with students and faculty interested in discussing careers in medicine and related fields.

Two of the lectures in Missouri are scheduled for 1971.

Dr. Robert E. Shank, Danforth Professor of Preventive Medicine, Washington University School of Medicine in St. Louis, will speak on "An Emerging Paradox: Population, Food and Health" at Missouri Southern College in Joplin in February 10.

Dr. Calvin Woodruff, Department of Pediatrics at the University of Missouri School of Medicine in Columbia, will speak on "The Ecology of Iron in the Human Infant" at Central Missouri State College in Warrensburg on January 20.

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President's Message

SHALL WE TURN OVER A 'NEW LEAF' FOR 1971?

MALPRACTICE SUITS

Our legal friends, the barristers, tell us that 95% of malpractice suits start from injudicious criticism of a physician, or his efforts to help suffering humanity, by another physician. The critical physician may think very little of a lifted eyebrow, a disdainful expression or a snide remark, but that is often the *seed* out of which trouble for a fellow physician begins to develop. Not enough physicians realize that any malpractice suit muddies the water so much that there is always a sizable stain on the entire profession. Unfortunately, I have been informed of several cases in which an immature physician, apparently imbued with the impression that his knowledge is the "last word," has openly criticized the treatment extended by a local family physician prior to referral of the patient. Expressions of this type to lay people, whose course of illness may not have been satisfactory for many, many reasons, often leads to unwarranted criticism and, sometimes, legal action.

I feel it is a definite responsibility of our pedagogical colleagues to educate young physicians more thoroughly in ethics and the art of finesse in bypassing sticky questions about performance of a colleague. *If the case has been mismanaged* and if the patient's present condition is less than optimal, embarrassing and probing questions often can be dispersed by a firm statement such as, "Let's not talk about that! That is water over the dam. The patient has 'such and so' and let us all get busy and straighten it out!" With that you can close the subject and get busy with your medical and scientific responsibilities directed at improving the patient's situation.



Joseph L. Fisher, M.D.

DOCTOR-DOCTOR RELATIONSHIPS

Physicians, as individuals, are generally cordial, compassionate, courteous, intelligent, well-educated, law-abiding gentlemen. We very well could be, and should be, proud of our profession; and yet, the very requirements which must be met by a man to become a physician, plus repeated exposure to circumstances that require decisions affecting life and death, tend to make each of us rugged individualists, often primadonnas. The doctor-patient relationship (physician adoration) plus the individual physician's successes serve to develop strong opinions and convictions in each of us.

By virtue of variable basic training, experience and background, two physicians seldom approach a problem in an identical manner and seldom see eye-to-eye regarding the solution of a difficult problem. The expression of a difference of opinion is often taken as a "personal attack," especially by a physician in a somewhat isolated environment (solo vs group practice). Distrust, lack of confidence and reluctance to cooperate with a fellow physician are often fermented by petty jealousies, poor communication and refusal of one physician (as well as his wife) to take the time and expend the effort to really get to know the "other guy" and his frau, who usually are very nice and quite capable people.

In troubled times such as these, with the profession constantly under attack at the national, state and local levels, it behooves all of us to stand firm and shoulder-to-shoulder as a strong, united family presenting a harmonious image of guardians of the "nation's health."

Instead of loving our enemies, let us treat our friends and colleagues a little better.

It is the privilege—and responsibility—of physicians in practice to see that medical education funds are available to the young men and women who are well qualified to study medicine, but need financial help.

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Woman's Auxiliary



It has never been my custom to make New Year resolutions, but this year will be an exception. 1970 was filled with so many memorable events—both glad and sad—that I felt I had to stop, catch my breath and take time to select the priorities for 1971. As a result, I want to share my resolutions with you.

I resolve:

- to continue efforts to educate all of our members and citizens about the problems facing medicine today.

- to encourage our members to take a positive approach about what's *right* with medicine in their communities.

- to urge our members to work actively in the Woman's Auxiliary and to promote its goals and programs.

- to help all doctors who are working for the best quality health care possible.

- to support all of our medical education and foundation programs.

- to devote all the precious time necessary to inform all legislators on all levels about medical problems and possible solutions for those problems.

- to promote friendship and joy among physicians and their families.

- to continue trying to bring honor and achievement to medicine in Missouri.

I also resolve to have a good and pleasant time while trying to accomplish these goals.

I believe we'll have a happier, more satisfying New Year if we can fulfill these resolutions, don't you?



Mrs. William M. Walker
President

EDITORIAL

MAYBE WE'RE NOT SO SMART!

Not long ago, I had the world's open championship case of laryngitis. For two or three days, it was bad. Then it got worse. By that time, I sounded like a tired, a very tired bull frog.

It was then I encountered an old friend who had been a professional singer. "Croak, croak," I said in greeting.

"My God," he replied, "You need an ice bag."

"An ice bag?" I said, as best I could. "How quaint. An ice bag. Where?"

"On your throat. Where else?" he answered. "It's the quickest way to reduce swelling of the vocal cords. Try it. I'll guarantee you'll be better in an hour."

At that point, my medical training made me rebel. "If I know anything at all about physiology," I said, "the temperature of the human larynx should be about 100 degrees. Besides, the temperature of mine right now is probably about 250 degrees. The temperature of ice is about 30 degrees. Now, to such an area of excellent blood supply as the neck, cold applied with no greater temperature differential cannot be expected to have the slightest effect on the vocal cords, which are 10 mm to 30 mm beneath the skin."

"Nevertheless," came the calm and exasperating reply, "Try it. You couldn't sound any worse."

At that point, reason took over. Recommended medical measures seemed unavailing. I was certainly not improving. Also, the next day I had some-

how to communicate with a full schedule of patients. Therefore, I went home, more in despair than in hope, and filled an old hot water bottle with crushed ice and applied this medieval mess to my throat.

Miracle of miracles! In a few minutes, I could make a piping sound like a newly hatched chick. In an hour, I sounded like an adolescent whose voice was changing. Several ice bags later, I sounded in bum shape, but recognizable.

The next day, I made it fairly well by alternating patients and ice bags. I was tremendously better than I dared hope. Then, in all gratitude and humility, I called my singing friend. "I apologize for my doubts and rudeness," I said. "You're wonderful."

"I'm not wonderful at all," came the reply. "I only told you what I've known for 40 years. I've done that same thing many times to get myself out of trouble."

"Of course," I said, "the whole cure must be psychosomatic. It really can't work any other way, you know."

But he was unimpressed. "I don't care if the cure is due to white mice, as long as it works," he said unscientifically, "But, just for your information, it works for everybody I know in the singing game."

What does a fellow do when science deserts him?

WILFRED E. WOOLDRIDGE, M.D.
Springfield

MISSOURI STATE MEDICAL ASSOCIATION

113th ANNUAL SESSION

April 15-18, 1971

Chase-Park Plaza Hotel, St. Louis

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Feb. 3	Office Pediatrics Continuing Education, M.U. School of Medicine Columbia 65201
Feb. 8-9	Cardiac Auscultation Postgraduate Medical Education K.U. School of Medicine, Kansas City, Kan. 66103
Feb. 18-19	Hearing and Speech Postgraduate Medical Education K.U. School of Medicine, Kansas City, Kan. 66103
Feb. 22-24	Surgery Postgraduate Medical Education K.U. School of Medicine, Kansas City, Kan. 66103
Feb. 26-27	The American College of Physicians Missouri Meeting and Missouri Society of Internal Medicine Missouri University Medical Center Columbia 65201
March 26-27	23rd Annual Midwest Cancer Conference Broadview Hotel, Wichita, Kan. AAGP Credit

Cape Girardeau County Sponsors Emergency Medical Training Course for Area Technicians

A basic training course for emergency medical technicians has been initiated at Southeast Missouri Hospital in Cape Girardeau by the Cape Girardeau County Medical Society.

Co-sponsors of the ten-session course, which began on November 16, are the Tenth Councilor District of the Missouri State Medical Association, Southeast Missouri Hospital, Missouri Chapter of the American College of Surgeons, Missouri State Ambulance Association and Cape County Private Ambulance Service. Sessions are being held at weekly intervals.

Dr. Charles McGinty, chairman of the Medical Society's Education Committee, said the pur-

pose is to train an adequate number of physicians and lay emergency service personnel in the event of natural and man-made disasters. Everyone involved in emergency services in the county was urged to participate.

The course was developed by the Committee on Trauma of the American College of Surgeons (Ambulance) and is in consonance with the recommendations of the National Academy of Sciences, National Research Council, Committee on Emergency Medical Services.

Local physicians and emergency personnel are acting as instructors.

County Society News

FIRST DISTRICT

COUNCILOR

JOHN N. MARTIN, M.D., ST. JOSEPH

BUCHANAN COUNTY MEDICAL SOCIETY

The annual dinner and meeting of the Buchanan County Medical Society and the St. Joseph Bar Association was held on November 4 in the Empire Room of Hotel Robidoux. Ninety physicians and attorneys attended the event.

Dr. Owen W. D. Craig, President of the Medical Society, and Mr. Philip Eveloff, President of the Bar Association presided jointly.

Judge William R. Collinson of the Eastern and Western Missouri U. S. District Court was the speaker for the evening. He discussed the problems of crime, including rehabilitation, the increasing number of repeat offenders and the shortage of prosecutors, judges, jurors and other personnel needed to handle criminal cases.

Judge Collinson noted that the great majority of bank robbers are heroin addicts. He cited the importance of punishment in coping with

crime. When thefts of mail, mostly for government checks, became an acute problem in the Kansas City area, federal judges determined that there would be no probation for convicted mail thieves, but all would serve time in jail. Crimes of mail theft dropped 80% in the six months following this edict.

Judge Collinson stated that the best solution to the growing crime problem is more complete law enforcement, with the public bearing the cost. He said that the people must decide if they want to pay this cost or continue to pay the rising costs of crime in losses, higher insurance rates and higher taxes.

Attorney Maurice Pope introduced the speaker. Arrangements for the meeting were made by the program chairmen of the two groups: Dr. Philip C. Lehman for the physicians and Mr. Wendel E. Koerner for the attorneys.

ELZA F. BUTLER, M.D., *Secretary*

GRAND RIVER MEDICAL SOCIETY

The November meeting of the Grand River Medical Society and its Woman's Auxiliary was held in the Strand Hotel in Chillicothe on November 12, 1970. Twenty-six members and guests attended the dinner and program.

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An auction of baked goods, supplied by the Woman's Auxiliary, was held. Dr. Warren Allen, Carrollton, was the "auctioneer." Proceeds from the sale were \$176.75.

Keith Averill, M.D., Kansas City, presented an informative discussion of current aspects of the treatment of acute myocardial infarction.

A question and answer session was followed by a short business meeting. The December meeting, which will be held at the Chillicothe Country Club on December 10, was discussed.

WINDSOR B. ATCHESON, M.D., *Secretary*

SECOND DISTRICT

COUNCILOR

LYSLE M. BACH, M.D., HANNIBAL

CHARITON-MACON-MONROE-RANDOLPH
COUNTY MEDICAL SOCIETY

Members of the Chariton-Macon-Monroe-

Randolph County Medical Society heard a talk by Dr. Charles W. Cheek and Dr. L. R. Landhuis, ophthalmologists from Columbia, on the subject of "Eye Findings in Diagnosis of Systemic Disease" at the Society meeting on November 11.

On November 19, the Society's annual guest-night dinner was held. Twelve members and 99 guests heard Dr. J. W. Fleming, Moberly, discuss his trip to Eastern Europe on a People-to-People Program. He told of visiting medical installations in Russia, Poland, Czechoslovakia and East Germany in Eastern Europe. He also visited in Belgium, Sweden and West Berlin.

Dr. Jean-Rene Dupont, Sikeston, spoke to members of the Society on December 10. His subject was "Rabies."

C. C. COHRS, M.D., *Secretary*

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New Members

Luis N. Bessone, M.D., 1515 Lafayette Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Bessone is a native of Rosario, Argentina, received his preliminary education at the Colegio Nacional and his M.D. degree at the Universidad Nacional del Litoral in 1959. He specializes in thoracic and cardiovascular surgery.

John F. Bigger, Jr., M.D., 600 S. Euclid Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Bigger is a native of Chattanooga, Tenn., received his preliminary education at Duke University and his M.D. degree at Washington University in 1964. He specializes in ophthalmology.

Paul A. Chipongian, M.D., 4569 Whisper Lake Dr., Florissant, has become a member of St. Louis Medical Society. Dr. Chipongian is a native of Nagearlan, Laguna, Philippines, received his preliminary education at Santo Tomas University and his M.D. degree at Santo Tomas University in 1955. He specializes in ophthalmology.

Robert L. Cooper, II, M.D., 122 E. Market, Warrensburg, has become a member of Johnson County Medical Society. Dr. Cooper is a native of Warrensburg, received his preliminary education at Central Missouri State College and his M.D. degree at the University of Missouri in 1964. He specializes in obstetrics and gynecology.

Anson E. de Vera, M.D., 5841 Devonshire Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. de Vera is a native of Pangasinan, Philippines, received his preliminary education at Santo Tomas University and his M.D. degree at Santo Tomas University in 1954. He specializes in anesthesiology.

Phillip G. Daley, M.D., 6651 Chippewa, St. Louis, has become a member of St. Louis Medical Society. Dr. Daley is a native of Madison, Ill., received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1963. He specializes in orthopedic surgery.

James B. Files, M.D., 515 E. High St., Jefferson City, has become a member of Cole County Medical Society. Dr. Files is a native of Dewitt, Ark., received his preliminary education at the

University of Arkansas and his M.D. degree at the University of Arkansas in 1956. He specializes in pathology.

Carlos H. Flores-Vega, M.D., 3915 Watson Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Flores-Vega is a native of Monterey, Mexico, received his preliminary education at Nuevo Leon State University and his M.D. degree at Nuevo Leon University in 1956. He specializes in internal medicine.

Norman A. Garrison, Jr., M.D., 919 South Jackson, Kennett, has become a member of Dunklin County Medical Society. Dr. Garrison is a native of Corinth, Miss., received his preliminary at the University of Mississippi and his M.D. degree at the University of Mississippi in 1969. He is in general practice.

William S. Joffe, M.D., 211 N. Meramec Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Joffe is a native of Kansas City, received his preliminary education at Washington University and his M.D. degree at Washington University in 1963. He specializes in ophthalmology.

Paul J. Langlois, M.D., 3720 Hampton Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Langlois is a native of Norwalk, Conn., received his preliminary education at Xavier University and his M.D. degree at St. Louis University in 1963. He specializes in urology.



"I'll bet my Dad takes more pills than your Dad!"

Maria Lyskowski, M.D., 141 N. Meramee Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Lyskowski is a native of Poland, received her preliminary education at Breslau University and her M.D. degree at the University of Hamburg in 1949. She specializes in psychiatry.

Stephan S. Morgan, M.D., 16 Hampton Village Plaza, St. Louis, has become a member of St. Louis Medical Society. Dr. Morgan is a native of Webb City, received his preliminary education at DePauw University and his M.D. degree at St. Louis University in 1964. He specializes in ophthalmology.

Voislav F. Ognyanov, M.D., 5400 Arsenal, St. Louis, has become a member of St. Louis Medical Society. Dr. Ognyanov is a native of Skopje, Yugoslavia, received his preliminary education in Skopje and his M.D. degree at the University of Skopje in 1957. He specializes in psychiatry.

Donald G. Sessions, M.D., 517 S. Euclid Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Sessions is a native of Chicago, Ill., received his preliminary education at Princeton University and his M.D. degree at Washington University in 1962. He specializes in otolaryngology.

Elbert E. Smith, III, M.D., 4320 Wornall Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Smith is a native of Kansas City, received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1965. He specializes in pediatrics.

Jorge A. Viamontes, M.D., 1420 Grattan, St. Louis, has become a member of St. Louis Medical Society. Dr. Viamontes is a native of Camaguey, Cuba, received his preliminary education at Camaguey, Cuba, and his M.D. degree at the University of Havana in 1948. He specializes in psychiatry.

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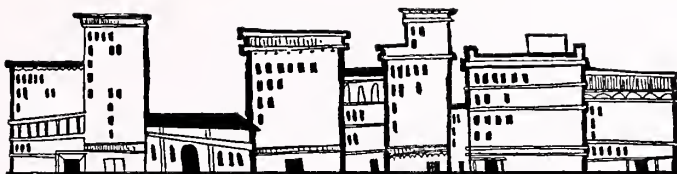
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From the Medical Schools



WASHINGTON UNIVERSITY

Dr. William H. Danforth, vice-chancellor for medical affairs, was named the 13th chancellor of Washington University on Dec. 1, 1970.

Dr. Danforth was named vice-chancellor for medical affairs in 1965 when he also became president of Washington University Medical School and associated hospitals. He will succeed Thomas H. Eliot who will retire after nine years as chancellor on June 30, 1971.

Doctor Danforth is a graduate of Princeton University and Harvard Medical School. A native of St. Louis, he was an intern and resident at Barnes Hospital and joined the Washington University School of Medicine as an assistant professor in 1960. He became an associate professor in 1965 and a full professor in 1967. He also is chairman of the board of the Danforth Foundation, an alumni trustee of Princeton University and a trustee of the American Youth Foundation. He is the brother of Missouri Attorney General John C. Danforth.

In accepting the appointment, Doctor Danforth said, "The opportunity to be part of such an important and exciting enterprise and to work with an eminent board of trustees, one of the nation's distinguished faculties and an able and vigorous student body is a privilege and a challenge."

UNIVERSITY OF MISSOURI

A new Family Practice Clinic will open soon at the Medical Center in Columbia. It will serve as the center for training resident physicians in the new specialty of family practice. Initially, it will serve as a center of care for some 200 mid-Missouri families.

The development of the new family medicine clinic follows the official designation of "family practice" as a specialty by the American Board of Family Practice (ABFP) in 1969. The establishment of that specialty—the 20th specialty and the first to appear in more than 20 years—grew from a deep concern over the dearth of family physicians, occurring at a time when the need for personal, family-oriented

care is gaining nationwide attention.

In the initial phases, the Family Practice Clinic hopes to serve a maximum of 200 families or about 700 individual patients. Medical care will be provided from a pool of physicians at the Medical Center who will spend part of each week in the clinic. The total patient load for the clinic will expand as staff and space are added.

Any physician seeking ABFP certification must complete three years of training beyond medical school. This must include resident work in various hospital services in addition to practice in a family medicine situation. Those departments participating in the UMC Medical Center family practice training program include the departments of community health, pediatrics, obstetrics and gynecology, surgery, psychiatry and physical medicine and rehabilitation.

* * *

Dr. Thomas S. Culley, associate medical director of the Medical Center in Columbia, has been named chief of staff of the Veterans Administration Hospital under construction across from the Medical Center.

Dr. Culley also has been named an assistant dean for the University of Missouri-Columbia School of Medicine with responsibilities for medical school relationships to the VA Hospital. He will continue to hold an appointment as assistant professor of orthopedic surgery at the Medical Center.

In his new position as chief of staff of the VA Hospital, Dr. Culley will supervise all professional services at the new 466-bed facility, which will employ more than 700 persons, including 195 doctors and nurses.

The VA Hospital will be affiliated with the University Medical Center in the areas of teaching and research. There are 94 such VA-Medical School affiliations in the Agency's 166-hospital system.

* * *

A joint affiliation agreement between the University of Missouri-Columbia School of Medicine and St. John's Mercy Hospital, a 600-bed private hospital located in St. Louis County, has been approved by the University Board of Cura-

tors and the Hospital's Board of Trustees.

According to the terms of the affiliation, St. John's Mercy will have direct administrative and legal responsibilities for its health care programs and the University will administer all educational programs through a full-time medical director who is a member of the professional staff of St. John's Mercy. The University also would be responsible for the academic appointments of the professional staff members of the hospital. In this way, the School of Medicine will assist St. John's Mercy in attaining individuals who are qualified for University faculty appointment, but who will be committed on a fulltime basis to the hospital. Furthermore, St. John's Mercy will have local autonomy for their educational programs subject to the standards of similar programs at the School of Medicine.

To implement the affiliation, a director of medical education, who is mutually satisfactory to the Dean of the School of Medicine and the hospital, will be appointed. A member of the full-time professional staff of the hospital, the director will serve as liaison between the Dean and the respective departments of the hospital and will be responsible to the Dean for the quality of the educational programs in the hospital.

Patient care and service functions will remain the direct responsibility of St. John's Mercy

Hospital with the University and its staff advising upon request. * * *

The Department of Radiology at the Medical Center recently won one of two top awards at the annual meeting of the Radiological Society of North America for an exhibit demonstrating both MARS (Missouri Automated Radiology System), a computer-assisted system in operation at the Medical Center for the reporting and retrieval of radiologic consultations, and University research on the computer analysis of X-rays.

The exhibit, which ran for five days in December at the Chicago meeting, competed with approximately 90 others. It was arranged by Drs. David L. Hall, research fellow in radiology; Samuel J. Dwyer, professor of electrical engineering; and Gwilym S. Lodwick, professor and chairman of the Department of Radiology. It won the Magna Cum Laude Award for a scientific exhibit. There is a similar award for the top clinical exhibit.

Several thousand radiologists attending the meeting saw the exhibit which involved a small computer terminal hooked up via telephone microwave to the large IBM 360-50 computer at the Medical Center in Columbia which holds the MARS programs. This setup simulated the MARS operation at the Medical Center where similar small computer terminals are located in various stations throughout the radiology department and the University Hospital and are linked with the same large computer. Another part of the exhibit featured displays of computer processed X-ray images.

The special telephone line developed for the high speed transmission of data from Columbia to Chicago and back for the MARS demonstration was itself a significant technical accomplishment. University engineers indicate this may have been the first time information was transmitted at high-speed over such a long distance for extended periods of time. Personnel at the Medical Center Computer Center provided much assistance making transmission possible from 8 AM to 8 PM each day for nearly a week. Other assistance came from IBM personnel both in Columbia and Chicago and also from General Telephone Co. personnel, who designed, installed and maintained the line.

Housing the exhibit was a display booth designed by the medical illustration staff at the Medical Center.

Developed at the University by members of the Department of Radiology and the School of Engineering, MARS to date has focused on the difficult problem of handling the medical information which flows through a radiology department. For example, the system provides for the

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computer storage and retrieval of a patient's clinical history, previous studies and reports, the reporting of radiologic diagnoses in the department and the display of these reports to terminals located on the patient's ward. Also, through the small computer terminals, the radiologist has access to computer systems to aid him in diagnosing bone tumors, heart diseases, gastric ulcers, and lung lesions. These computer-aided diagnostic programs also were developed in the department of radiology.

The use of MARS at the Medical Center has resulted in a decrease, from 23 to 3.3 hours, between the time a patient arrived in the department for examination and the time a written report was available to the referring physician.

ST. LOUIS UNIVERSITY

Dr. James D. Cherry, professor of pediatrics at the St. Louis University School of Medicine, has been named vice-chairman of the Department of Pediatrics. In his new administrative post, he will assist Dr. Arthur E. McElfresh, professor and chairman of the Department of Pediatrics.

Doctor Cherry joined the School of Medicine faculty as associate professor of pediatrics in 1966. Before that time, he was at the University of Wisconsin School of Medicine, where he joined the medical faculty in 1963. While at the University of Wisconsin, he served as director of the John A. Hartford Research Laboratory, Madison General Hospital.

He earned the M.D. degree at the University of Vermont College of Medicine in 1957 and took his internship in pediatrics at Boston City Hospital. From 1958 to 1959, he remained at Boston City Hospital for the first year of his residency in pediatrics. He continued this training at Kings County Hospital in Brooklyn.

* * *

Two memorial lectures were delivered December 4 during Ophthalmology Alumni Day sponsored by the Department of Ophthalmology. A lecture honoring the late Dr. Robert Israel was presented by Dr. Frederick C. Blodi, head of University Hospital's Department of Ophthalmology, University of Iowa. The Thomas E. Andert lecture was delivered by Dr. Richard F. Brubaker, an ophthalmologist from Mayo Clinic, Rochester, who discussed "Technical Aspects of Cryoextraction of Cataracts." Mr. Andert was an optician who devoted much of his professional life to optical workers. Dr. Stephen F. Bowen, Jr. and Dr. Walter R. Stafford were co-chairmen of the Alumni day function. About 75 ophthalmologists who took their residency

training at the St. Louis University Group of Hospitals were invited to attend.

Dr. D. Elliott O'Reilly has been named full-time chairman of the Department of Orthopedic Surgery.

Doctor O'Reilly has served as part-time chairman of the department since 1968 and has been a member of the School of Medicine faculty since 1949. He now holds the academic rank of associate professor of orthopedic surgery.

Doctor O'Reilly is orthopedist-in-chief at the St. Louis University Hospitals. He is chief of the orthopedic section and director of the Cerebral Palsy Training Center at Cardinal Glennon Memorial Hospital for Children. He also is an active staff member at St. Mary's Hospital and St. John's Mercy Hospital and medical director of the Department of Physiotherapy at St. Louis University.

* * *

The Child Development Clinic of the School of Medicine's Department of Pediatrics has received a \$180,000 award from the Missouri Division of Health, Section of Maternal and Child Health, for the maintenance of a Mental Retardation Evaluation Clinic. The grant is for a one-year period. Dr. Austin R. Sharp, associate professor of pediatrics, is director of the clinic. Dr. Allan G. Barclay, professor of psychology, is associate director. The clinic provides diagnostic facilities for any child in the state of Missouri. The clinic is staffed with pediatricians, psychologists, speech therapists, nutritionists and social workers.

Dr. Eli M. Nadel, associate dean, School of Medicine, has been elected vice-chairman of the Project Review Committee of the Missouri Regional Medical Program. Dr. William Mayer, dean of the University of Missouri School of Medicine, was elected chairman. The Project Review Committee advises the Council on the medical merit of project proposals and on problems requiring policy decisions. The Review Committee consists of deans of the three Medical Schools and two Osteopathy Schools in Missouri and representatives of the State Divisions of Health, Welfare and Mental Disease. Missouri Regional Medical Program encompasses the entire state exclusive of five counties surrounding metropolitan St. Louis. Its current funding is \$3.8 million.

Dr. Scott Swisher, chairman of the Department of Medicine at Michigan State University School of Medicine, was the first Steven Kessler visiting professor of internal medicine at the School of Medicine. As visiting professor, he was associated with Dr. Thomas F. Frawley, chairman of the Department of Internal Medicine, on November 10-13.

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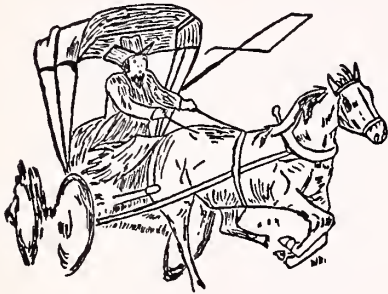
Indications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic).

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Missouri Medicine in Review



FORTY YEARS AGO

The White House Conference on Child Health and Protection, called by President Herbert Hoover, met in Washington on Nov. 19-22, 1930. The meeting was much larger and more extensive in its scope and work than the previous conferences called by Presidents Franklin D. Roosevelt and Woodrow Wilson during their administrations. Approximately 5,000 delegates from all parts of the United States were present. It is interesting to note that it was one feature of the program of the present administration that was acclaimed from all sides and approved by political foes as well as friends.

Dr. Mazyck P. Ravenel, Columbia, professor of preventive medicine and bacteriology at the University of Missouri, was appointed consultant in public health and medical education to the Missouri State Board of Health on Dec. 2, 1930. Doctor Ravenel is an internationally-known authority on public health, hygiene and sanitation. The scientific accuracy of Doctor Ravenel's work and his ability as a pioneer bacteriologist were established through a controversy with the eminent German scientist, Doctor Koch, when Doctor Ravenel proved, in opposition to Doctor Koch's contention, that human beings can contract bovine type of tuberculosis under certain conditions.

TWENTY-FIVE YEARS AGO

The end of the war made possible a session of the House of Delegates of the American Medical Association in Chicago during the period from December 3 through December 5. An unusual feature of this meeting was the presentation to Brig. Gen. Fred W. Rankin of the Distinguished Service Medal with a citation recog-

nizing his military service. In making his presentation, Dr. Roger I. Lee called attention to the pardonable pride which the Association takes in the fact that more than 60,000 physicians served in the Armed Forces. In introducing Brig. Gen. Noyes, who conferred the decoration, Doctor Lee said, "Since the outbreak of World War II, 227 doctors have been reported killed in action and 409 died in military service. The Bronze Star was conferred on 297 physicians for exceptional conduct, including bravery equal to that of the most courageous fighters under the most hazardous conditions. The Silver Star has been given to 100 physicians, the Legion of Merit to 145 physicians, the Soldiers Medal to 46 physicians, the United States of America Typhus Medal to 34 physicians, the Medal of Honor to three, the Navy and Marine Corps Medal to 17 and the Navy Cross to 14 physicians."

TEN YEARS AGO

Among the first appointments made by President-Elect John Kennedy, and probably of the most interest to medicine, was that of Gov. Abraham Ribicoff of Connecticut as Secretary of Health, Education and Welfare. When the announcement was made, Governor Ribicoff was quoted as saying that in this field, his philosophy "is on all fours with the philosophy of President-Elect Kennedy." During the time that Governor Ribicoff was in the House of Representatives and during his term as Governor of Connecticut, he showed no interest in "compulsory health insurance." However, now he is a cabinet member in an administration that is pledged to work for broadening of Social Security which has been opposed by the medical profession.

The 12th Annual Scientific Assembly of the Missouri Academy of General Practice, which was held at the Chase Hotel in St. Louis on November 5-6, registered a total of 550 people. Of this number, 250 were physicians and 75 were medical students. Dr. Roy Pearse, Jr., Nevada, was elected President-Elect. It is interesting to note that both Doctor Pearse's grandfather, Dr. Herman E. Pearse, and his uncle, Dr. E. Lee Miller, had served as President of the Missouri State Medical Association.

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prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. **Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective

measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically. **Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.



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113th MSMA Annual Session
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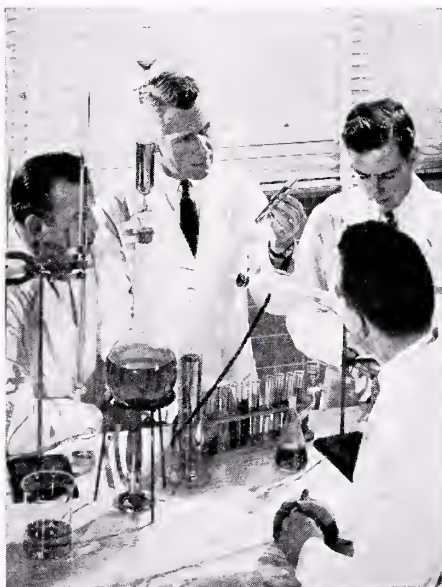
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Contraindications: Known hypersensitivity. Should not be given concomitantly with or within at least 14 days following the discontinuance of a monoamine oxidase inhibitor. Then initiate dosage of amitriptyline HCl cautiously with gradual increase in dosage until optimum response is achieved. Not recommended during the acute recovery phase following myocardial infarction or for patients under 12 years of age. **Warnings:** May block the antihypertensive action of guanethidine or similarly acting compounds. Should be used with caution in patients with a history of seizures or urinary retention, or with narrow-angle glaucoma or increased intraocular pressure. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. Safe use during pregnancy and lactation has not been established; in pregnant patients, nursing mothers, or women who may become pregnant, weigh possible benefits against possible hazards to mother and child.

Precautions: When used to treat the depressive component of schizophrenia, psychotic symptoms may be aggravated; in manic-depressive psychosis, depressed patients may experience a shift toward the manic phase, and paranoid delusions, with or without associated hostility, may be exaggerated; in any of these circumstances, it may be advisable to reduce the dose of amitriptyline HCl, or to use a major tranquilizing drug, such as meprobamate, concurrently.

When given with anticholinergic agents or sympathomimetic drugs, close supervision and careful adjustment of dosages are required. May enhance the response to alcohol and the effects of barbiturates and other CNS depressants. The possibility of suicide in depressed patients remains during treatment and until significant remission occurs; this type of patient should not have easy access to large quantities of the drug. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.

Adverse Reactions: *Note:* Included in this listing are a few adverse reactions not reported with this specific drug. However, pharmacological similarities among the tricyclic antidepressant drugs require that each reaction be considered when amitriptyline is administered.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. **CNS and Neuromuscular:** Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms. **Anticholinergic:** Dry mouth, blurred vision, disturbance of accommodation, constipation, paralytic ileus, urinary retention, dilatation of urinary tract. **Allergic:** Skin rash, urticaria, photosensitization, edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. **Gastrointestinal:** Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, parotid swelling. **Endocrine:** Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female, increased or decreased libido. **Other:** Dizziness, weakness, fatigue, headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, drowsiness, jaundice. **Withdrawal Symptoms:** Abrupt cessation of treatment after prolonged administration may produce nausea, headache, and malaise; these are not indicative of addiction. **How Supplied:** Tablets containing 10 mg and 25 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100, 1000, and 5000; tablets containing 50 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100 and 1000; for intramuscular use, in 10-cc vials containing per cc: 10 mg amitriptyline HCl, 44 mg dextrose, and 1.5 mg methylparaben and 0.2 mg propylparaben as preservatives.

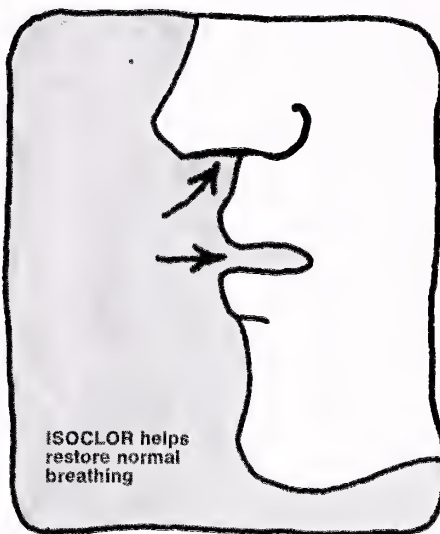
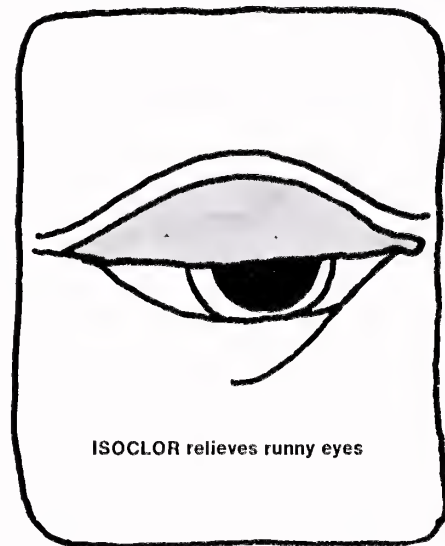
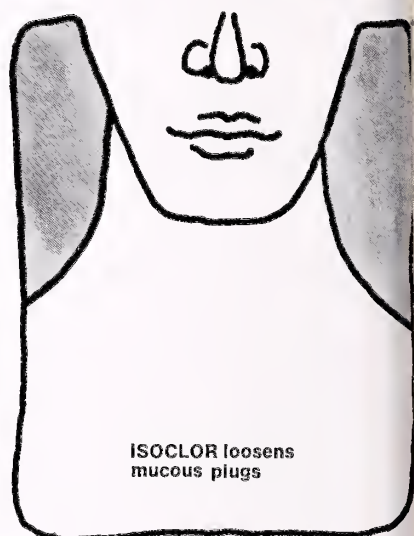
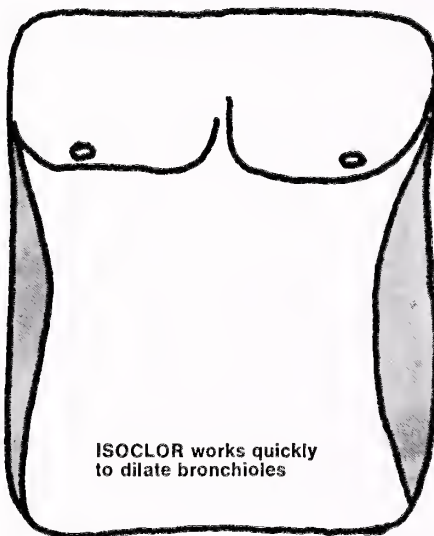
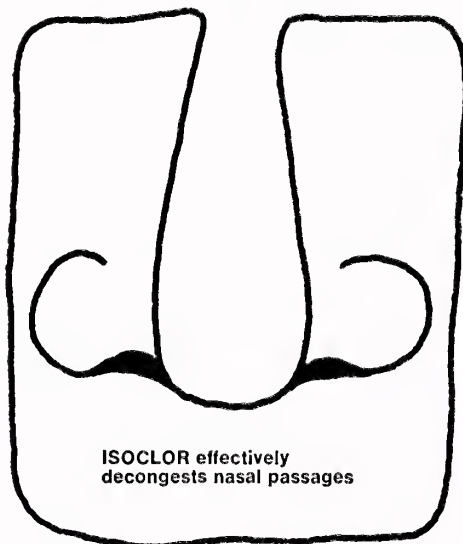
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ISOCLOR promptly and effectively combats symptomatic miseries of the common cold and influenza



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Isoclor provides quick, long lasting relief of respiratory congestion and discomfort brought on by common colds, influenza, and allergies. Isoclor contains chlorpheniramine maleate — one of the most potent and safest antihistamines. And pseudoephedrine HCl — a decongestant bronchodilator providing effective and long lasting relief for the entire respiratory tract. Both work to extend the range of relief.

COMPOSITION: Each tablet or 2 teaspoonfuls of liquid contains:
Chlorpheniramine Maleate..... 4 mg.
Pseudoephedrine HCl..... 25 mg.

Each ISOCLOR Timesule contains:

Chlorpheniramine Maleate..... 10 mg.
Pseudoephedrine HCl..... 65 mg.
In a special pellet form providing both prompt and sustained effect.

INDICATIONS: For symptomatic relief of colds, hay fever, allergic conjunctivitis, perennial rhinitis of allergic origin and sinusitis. Opens nasal, sinus and bronchial passages orally.

CONTRAINDICATIONS: Sensitivity to antihistamines or sympathomimetic agents. Severe hypertension or severe cardiac disease.

PRECAUTIONS: Use with caution in patients suffering with hyperthyroidism. Patients susceptible to the soporific effects of chlorpheniramine should be warned against driving or operating machinery should drowsiness occur.

CAUTION: Federal law prohibits dispensing without prescription.

SUPPLIED: Tablets: Bottles of 100 and 1000. Liquid: 4 oz. bottles, pints, and gallons; Timesules: Bottles of 50, 250, and 1000.

DOSAGE AND ADMINISTRATION:	Tablets	Liquid	Timesule
Adults:	1 q. 4 h.	2 tsp. q. 3-4 h.	1 q. 12 h.
Children 6-12 years:		1 tsp. q. 3-4 h.	
40-50 pounds:		¾-1 tsp. q. 3-4 h.	
30-40 pounds:		½-¾ tsp. q. 3-4 h.	
20-30 pounds:		¼-½ tsp. q. 3-4 h.	
15-20 pounds:		⅛-¼ tsp. q. 3-4 h.	



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Legislative Session Gets Underway

The 76th General Session of the Missouri State Legislature opened in a flurry of activity early in January with the introduction of bills at a pace which could set records.

In all, as of January 15, a total of 213 bills and 13 joint resolutions had been introduced in the House and 44 bills and 3 joint resolutions in the Senate.

As usual, a number of the bills are of interest or concern to the medical profession and are coming under the scrutiny of the Association's Legislative Affairs Committee chaired by John I. Matthews, M.D. of Jefferson City.

Among the measures of special interest to Association members are the following:

Senate Bill 7 provides that transactions involving transfusion of blood and the transplanting of organs shall be a service not a sale and not subject to any implied warranties of merchantability and fitness for a particular purpose as to a defect that cannot be detected or removed by reasonable use of scientific procedure or techniques.

House Bill 95 would change the malpractice statute of limitations in Missouri from the present two years from the act to two years from discovery in all cases.

House Bill 79 has to do with proposed changes in the Chiropractic practice act. The measure would eliminate the present limitation that examination and adjustment be "by hand" and extends the area to include the neuromusculoskeletal system. It would permit chiropractors to recommend vitamins or mineral products and allows the use of "any physical, chemical, electrical or thermal method" or x-ray for diagnosis. It also expressly would permit the use of "manual, mechanical, electrical or natural methods, physiotherapy (including light, sound, heat, cold, water or exercise) or by the oral administration of foods and food concentrates, food extracts and, says chiropractors, may apply

first aid and hygiene."

Among other measures of interest to the medical profession:

House Bills

House Bill 17 would extend medicaid to include diagnostic visits of welfare patients under 21 plus home health care services for all eligible for medicaid at an estimated annual cost of \$914,400.

House Bill 29 would relieve physicians and nurses of any damages that may result from emergency care. (Good Samaritan)

House Bill 46 would permit the seizure of any "hallucinogenic, hypnotic, somnifacient or stimulating drug and if title cannot be ascertained it can be distributed to non-profit hospitals.

House Bill 69 is one of a series of bills tightening the laws on drug abuse as recommended by a special commission. It calls for cooperation of the Department of Health and Welfare with federal and other state agencies in suppression of traffic in dangerous substances, exchange of information, training programs in law enforcement and educational programs.

House Bill 70 provides the court procedure, medical examination and requirement of legal counsel for any person believed to be a narcotic addict or a drug dependent person. A narcotic addict means "any individual who habitually uses any narcotic drug so as to endanger the public morals, health, safety or welfare, or who is or has been so far addicted to the use of such narcotic drugs as to have lost the power of self control with reference to addiction."

A drug dependent person means "a person who is using a narcotic, hallucinogenic, hypnotic, somnifacient or stimulating drug and who is in a state of psychic or physical dependence, or both, arising from the use of such substance on a continuous basis."

House Bill 71 provides for the voluntary commitment of a drug addict to treatment in a state hospital or by commitment through the information of a relative. Treatment would involve at least six months in hospital and up to three years of post hospitalization scrutiny. This could not involve an addict accused of a felony.

House Bill 73 would permit a minor to get medical treatment for pregnancy, venereal disease or drug abuse without parental consent. The parents or guardian may be notified but they are not liable for payment.

House Bill 116 would permit minors between 18 and 21 years of age to donate blood without consent of parent or guardian but bars them from receiving compensation.

House Bill 132 would make it a misdemeanor for a pharmacist not to note on prescriptions if a preparation may cause drowsiness or sleepiness and the patient should not drive a motor vehicle while under the prescription's influence.

Senate Bills

Senate Bill 8 would set a limit of \$50,000 on the tort liability of hospitals and their trustees, directors, employees or volunteer workers.

Senate Bill 9 would require physicians and dentists applying for membership on a county hospital staff to provide on a written form information concerning training and qualifications and accept the board as supreme governing authority of the hospital, and authorizes the board to adopt bylaws, rules, regulations and policies regarding profes-

MSMA
News

(Continued on Back of Page)

Health Conclusions Are Challenged

The president of the American Medical Association has challenged the conclusions often drawn from international vital statistics which seem to indicate that the United States lags behind a dozen other nations in quality of health care.

Record-keeping criteria vary so widely throughout the world that even among the highly developed nations there is no real basis for comparison, said Walter C. Bornemeier, M.D., AMA President, in a press conference at the AMA's Chicago headquarters.

"I do not imply that health care in America is perfect. We know that there is room for improvement and the American Medical Association, together with many other interested organizations and governmental units, is working constantly to improve care," Dr. Bornemeier said.

"But we do know that the international statistics often cited to show that American health care is poor are not valid for comparative purposes."

Source of the statistics on such areas as infant mortality and other deaths is the United Nation's Demographic Yearbook, published annually by the world body.

"What gets overlooked is the introductory chapter. This chapter points out the extreme difficulty, even impossibility, of drawing meaningful comparisons among nations from the data collected," the medical leader declared.

Statistics from the Demographic Yearbook are measures of different things in different countries, he said. More important, the figures fall prey to variables such as social conditions and population groups which differ among countries.

"The Yearbook, itself, points out that reporting criteria and practices vary among the countries represented. Too often skimmed, or skipped completely, the introduction is essential to a

full understanding of what the figures mean."

Dr. Bornemeier cited as an example the definition of a live birth in the U.S., it generally means any sign of life: a heart beat, movement of voluntary muscles, or even pulsation of the umbilical cord. In some countries, a birth - and therefore, an infant death - isn't recorded if the infant doesn't draw a breath, or in some cases, if it dies before its birth is registered some days later.

Even more encouraging, the rate has been trimmed 25 per cent in the decade just ended, compared with a drop of 11 per cent in the decade before.

"That still leaves the question of why infant mortality rates seem even lower in nations such as the Scandinavian countries, the Netherlands and Japan. Aside from national differences in what the statistics mean, the answers lie not in an assault on the quality of American medical care, but in a comparison of social, environmental and other factors affecting the populations of various countries."

Unlike the homogeneous population of countries such as those of Scandinavia, he declared, the American population includes a vast spectrum of national backgrounds, races, cultural strata and economic levels. A segment normally termed "nonwhite" - but perhaps more accurately classified as culturally deprived or poor - contributes heavily to U.S. infant mortality. This group has no equivalent in most of the countries which appear to lead in infant mortality.

Coupled with this is the matter of differing national attitudes toward sex, abortion - and the prevention of unwanted pregnancies to begin with.

"In many of those countries with low infant mortality," said Dr. Bornemeier, "almost every baby born is a wanted baby. In Japan for example, there is abortion upon demand."

Dr. Bornemeier spotlighted

other infant mortality problems posed by America's poor.

"Thus, an infant who doesn't survive the critical early hours of life would be reported as an infant mortality in the United States - but would never even be counted in the population of some other countries."

Although often used, infant mortality is not the best, or even a good, indicator of the health status of a nation. Mortality rates from selected diseases show wide national variations. It is necessary to look at the complete record of a nation's health to draw meaningful conclusion, he said.

Should the United States revise its statistical definitions?

"Undoubtedly, that would make us look better compared with the rest of the world," said Dr. Bornemeier. "But in return, we would cloud our view of where our real problems lie. And no matter how well we compare with other countries, we still have work ahead until infant mortality is pushed to an irreducible minimum."

Legislative (continued)

sional activities in the hospital.

Senate Bill 22 would enact an environmental protection act authorizing political entities and private persons to sue in circuit court for relief against pollution, impairment or destruction of air, water and other natural resources or intervene in licensing and administrative proceedings; court may determine reasonableness of standards; no feasible and prudent alternative to defendant's conduct may be an affirmative defense consistent with public health, safety and welfare.

Senate Bill 28 would exempt physicians and surgeons from civil damage liability for acts and omissions while rendering in good faith, emergency care at the scene of an emergency. (Good Samaritan)

William Beaumont's Travels and the 'Cholera Campaign' of 1832

DONALD R. KORST, M.D.

Madison, Wisconsin

MISSOURI MEDICINE expresses appreciation to Dr. Donald R. Korst, the author, and the Wisconsin Medical Journal for permission to reprint this excellent historical feature with unusual illustrations. Doctor Korst is Associate Professor of Medicine, University of Wisconsin Medical School. This paper was originally presented at a meeting of the William Snow Miller Medical History Seminar at the Middleton Memorial Library, University of Wisconsin Medical Center, Madison. It appeared in the December, 1969 issue of the Wisconsin Medical Journal.—The Editors.

THE TIMES and travels of U. S. Army Surgeon William Beaumont, from his commission as Surgeon's Mate in December 1812 until his resignation in April 1853, provide fascinating insight to the development of the western frontier and the Blackhawk and 1812 Wars.

During these turbulent times and under adverse conditions, he was to accomplish in 1833 the famous publication of "Experiments and Observations on the Gastric Juice and the Physiology of Digestion."

Of great medical interest during this period was the first epidemic of Asiatic cholera in the United States and its extension to the frontier during the Blackhawk War of 1832. Beaumont, the thinking physician that he was, was concerned, although, as the research of this report reveals, was denied first-hand experience during the first epidemic.

Primary source material has been microfilms of the Washington University School of Medicine Beaumont Letters and microfilm reprints of letters selected from the document file of the office of the Adjutant General and Surgeon General, 1812-1842, collected for the late Dr. F. A. Collier, Ann Arbor, Michigan.

At the time Beaumont entered service in 1812 at Plattsburgh, New York, he was an experienced practitioner and had kept careful notes concerning some of his interesting cases. This

ability and detail to personal records undoubtedly contributed to the importance of the record he leaves of the medicine of those times.

His recorded experience at camps and battles along the Lake Ontario and Niagara frontier gives some insight into a nature of inquiry and comparison (Fig. 1).

"Ascertained the treatment of the Surgeon of the 11th Regt. in this camp in diseases now prevailing, which is to give from one to three Emits. and as many cathartics, in order to cleanse the prima viae and obviate the symptoms of a bilious diarrhea, and then give tonics. Behold the gasping, gasping mortals, how they die! From two to five in a day! Twenty-six in the course of two weeks out of four hundred. Can it be correct practice when, in the next regiment, out of six hundred, in an exactly similar situation and laboring under the same diseases, not one has died in the same time under a diametrically opposite practice? No! Depletion by blood-letting and antimonial sudorifics and diaphoretics, and an entire disuse of all tonic medicines, is the proper plan of cure." (December 12, 1812—North of Plattsburgh.)

The travel of the times was conducive to a hardy and rugged constitution. Water routes west predominated in the trade of furs and the frontier forts were at important junctions of the rivers and lakes such as Detroit, Mackinac,



Fig. 1—Portrait of William Beaumont as an Army surgeon. (From frontispiece of "Life and Letters of Dr. William Beaumont" by Jesse S. Myer, M.D., 1939)

Green Bay (Fort Howard), Portage (Fort Winnebago) and Prairie du Chien (Fort Crawford), all in the Michigan Territory (Fig. 2).

Travel on Lake Erie and Lake Huron was improved by use of sailing and side paddle wheel vessels such as the Walk-in-the-Water (330 tons and 200 passengers) which Beaumont took to his first assignment in the West at Fort Mackinac.

His travels farther west on later assignments at Fort Howard and Fort Crawford were made by canoe. The large Montreal canoes (bateaux) that became the real freighters of the fur trade era were never replaced by sailing ships. Such a canoe 35 to 40 feet long could carry five tons of crew and freight and with 14 men could make four to six miles an hour in calm and eight to ten miles an hour with wind at the back.

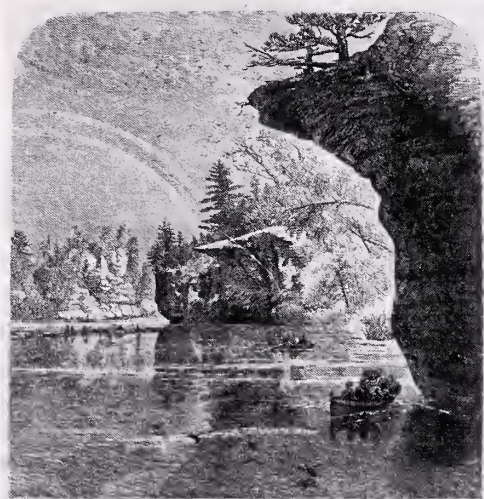
It was said that good voyagers could make Portage to Prairie du Chien in two days downstream and three days upstream with a full load of bales of merchandise, tobacco, flour, bags of shot lead balls, kegs of sugar, gun powder, wine, along with cases of guns, kettles and family property, so that the canoe was loaded to the gunnels (Fig. 3).

Descriptions of travel along the river routes usually mention the plagues of flies, big and little, mosquitoes and gnats that swarmed as thickly as bees about the hive. It was curious to observe the herds under a scorching sun avoid the shade of trees where insects most abound and place themselves where they could feel the full effect of the powerful rays, thus exchanging a greater for a smaller evil. Creatures who manifest a shyness of each other press closely together in promiscuous assemblage, as if by close approximation they hoped to crowd out their enemies.

Cash money of the times was lean. Much of the correspondence of Beaumont to the Surgeon



Fig. 2—A section of the United States map of 1838 (published by T. G. Bradford, Massachusetts) at the time of William Beaumont's travels into the Northwest Territory. Michigan became a state in 1836 and the Wisconsin Territory was formed. Iowa became a separate territory in 1838. Wisconsin was originally claimed as part of the colony of Massachusetts and then made a part of the Northwest Territory after the Revolutionary War. Shortly, it was made part of Indiana Territory and then the Michigan Territory in 1805. (From Author's collection)



Dunes of the Wisconsin, "The Jaws"



STAND ROCK ON THE WISCONSIN RIVER

Fig. 3—Scenes along the Wisconsin River traveled by Beaumont and his family. The canoe route was a two-to-three-day journey from Fort Winnebago at Portage to Fort Crawford at Prairie du Chien. (From author's collection)

General's office concerns what one might consider trivial sums unless the buying power of a few cents in 1820 is appreciated. The army surgeons were allowed private practice at the western forts as they were often the only physicians.

A suggested fee schedule might have read: office visit 25 cents, riding per mile 20 cents, doctor in the night 38 cents, consultation \$1, and an obstetrical case \$3.50 (assuming the doctor could get it).

A story of the times told of the farmer's wife who needed a needle. The farmer, not having a penny, selected a large hen's egg and walked eight miles through the snow to the village store. It was the custom to furnish a drink of whiskey with each purchase. After receiving a new needle for the egg, the farmer said he supposed he was entitled to a drink. Certainly, said the merchant and drew a half tumbler. The farmer then requested an egg in the drink, so the merchant broke the egg he had just received, which contained a double yoke. The farmer, as he drank, allowed as how the egg was double yoked that he perhaps was entitled to two needles. The merchant thereupon gave him another needle, the men shook hands, and they parted.

Beaumont's travel time was not spent in idleness. As he sailed from Buffalo on the three-day trip to Detroit, his notebook reveals that he began to adopt the code of Benjamin Franklin (Fig. 4) which lists 13 virtues in one column and the days of the week in the opposite column. Whenever these are broken, a black dot is entered so that a clear line throughout the week would indicate a virtue strengthened.

His virtue was also reflected in a letter from Mackinac Island to Surgeon General Lovell, former friend and associate in the 1812 War, in a request for furlough to marry in Plattsburgh. He wrote, "... but other potent reasons urge the request. To live a bachelor and alone on this desert, isolated isle, I am not contented; to mingle with its copper colored inhabitants I cannot; to marry I am resolved; to Plattsburgh I must go (if permission be obtained) for there my direction is needed."

The gunshot wound to Alexis St. Martin that created the "famous fistula" occurred in 1822 and first reports to the Surgeon General were made in 1824.

Recognition was prompt and Beaumont was offered the first honorary membership in the Medical Society of the Michigan Territory in March, 1825.

The first series of experiments were made at Mackinac, Fort Niagara and Plattsburgh, requiring Beaumont's sponsorship of the French-Canadian voyager at these various stations.

In 1828 Beaumont moved his family and St. Martin and family to Green Bay and then to Prairie du Chien.

In order to appreciate the true sense of the wilderness in this part of Wisconsin in 1828, a short narrative of one of the first white settlers is of interest. One of the earliest comers to the southwestern part was Ebenezer Brigham of Blue Mounds. He journeyed from Massachusetts to St. Louis in 1818, thence, in the spring of 1828, he removed to Blue Mounds, the most advanced outpost in the mines. The nearest settler

Form of the Pages

TEMPERANCE.							
<i>Eat not to Dulness. Drink not to Elevation.</i>							
	S	M	T	W	T	F	S
T							
S	••	•		•		•	
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Fig. 4—An example of a page from Benjamin Franklin's notebook of a scheme for moral improvement. This was published in Franklin's autobiography in 1790, but perhaps not in complete form until 1818. Beaumont, May 31, 1820, while aboard the steamboat Walk-in-the-Water enroute from Buffalo to Detroit, studied the plan to attain moral perfection and on September 9 commented that he was starting his own diary of conduct. Franklin wrote, "Let sleep not close your eyes till you have thrice examined the transactions of the day; where have I strayed, what have I done, what have I omitted?" Each day the faults were noted as a black dot opposite the list of 13 virtues in the left column. The virtue to strengthen that week is stated at the top of the page, leaving the other virtues to their ordinary chance. One could complete 4 of the 13 week self improvements in a year's time, aiming for a record of increasing pages clean of black dots. The names of the virtues with their precepts were:

1. TEMPERANCE. *Eat not to Dulness. Drink not to Elevation.*

2. SILENCE. *Speak not but what may benefit others or yourself. Avoid trifling Conversation.*

3. ORDER. *Let all your Things have their Places. Let each Part of your Business have its Time.*

4. RESOLUTION. *Resolve to perform what you ought. Perform without fail what you resolve.*

5. FRUGALITY. *Make no Expenditure but to do good to others or yourself; i.e. Waste nothing.*

6. INDUSTRY. *Lose no Time. Be always employ'd in something useful. Cut off all unnecessary Actions.*

7. SINCERITY. *Use no hurtful Deceit. Think innocently and justly; and, if you speak, speak accordingly.*

8. JUSTICE. *Wrong none, by doing Injuries or omitting*

the Benefits that are your Duty.

9. MODERATION. *Avoid Extremes. Forbear resenting Injuries so much as you think they deserve.*

10. CLEANLINESS. *Tolerate no Uncleanliness in Body, Cloaths or Habitation.*

11. TRANQUILITY. *Be not disturbed at Trifles, or at Accidents common or unavoidable.*

12. CHASTITY. *Rarely use Venery but for Health or Offspring; Never to Dulness, Weakness or the Injury of your own or another's Peace or Reputation.*

13. HUMILITY. *Imitate Jesus and Socrates.*

(From FRANKLIN: Autobiography; Yale University Press, 1964)

was at what is now Dodgeville, about 20 miles distant. Mineral Point and most of the other diggings, where villages have since grown up, had not then been discovered. On the southeast, the nearest house was on the O'Plain River, 12 miles west of Chicago. On the east, Solomon Juneau was his nearest neighbor, at the mouth of the Milwaukee River; and on the northeast, Green Bay was the nearest settlement—Fort Winnebago not then being projected.

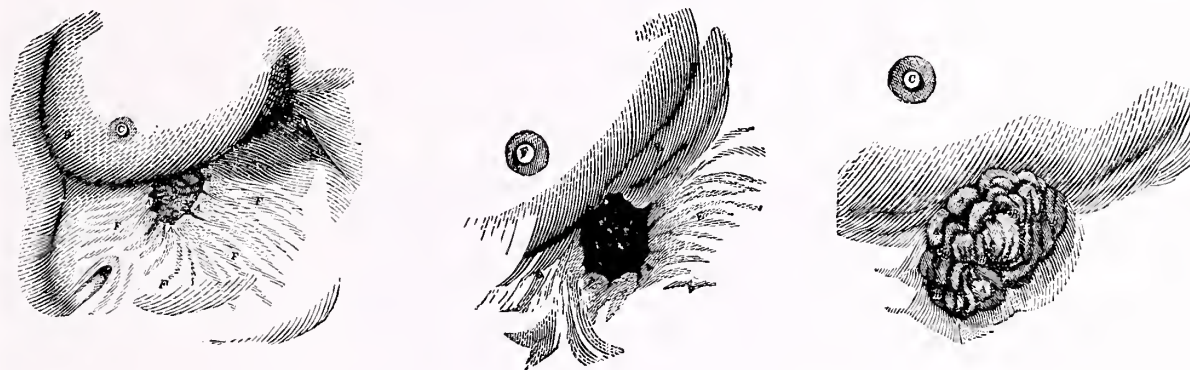
It was at Fort Crawford, Prairie du Chien, that the second series (Fig. 5) of gastric physiology experiments were carried out from June, 1829, costing Beaumont \$160 annually to support the St. Martins. In addition, he outfitted Alexis, his wife and three children to return by canoe to Montreal in April, 1832, via St. Louis, the Ohio River, and Lake Erie, with arrival home in June just in the middle of the first cholera epidemic on the North American continent. St. Martin is noted to have withstood the ravages and impurity while hundreds around him fell sacrifice to its fatal influence, although it is not documented that he actually had the disease.

Undoubtedly, Surgeon Beaumont had many contacts with the Indians, although he writes little of them (Figs. 6 and 7). He pleads with Congress to grant better benefits and furlough for those who have the long and arduous duty (12 to 14 years) on an extreme frontier.

It is probable that he remained in the hospital of the old fort while the main garrison moved to the new Fort Crawford; at least in May, 1831, he made a report of a survey of medicines destroyed by collapsed shelves due to rotting wood.

Beaumont was busy writing to arrange a scientific furlough in order to carry out further studies and complete his book in the East. He was frustrated during this time by the development of the Indian uprising and the outbreak of cholera. As it turned out, neither of these reached Fort Crawford prior to August 22,

Fig. 5—Three views of the “famous fistula” of Alexis St. Martin as depicted by Beaumont in his original manuscript.



A

This engraving represents the ordinary appearance of the left breast and the side, the aperture filled with the valve; the subject in an erect position.

(AAA) The circumference and edge of the aperture, within which is seen the valve.

(B) The attachment of the valvular portion of the stomach to the superior part of the aperture.

(C) The nipple.

(D) The anterior portion of the breast.

(E) The scar where the opening was made with the scalpel, and the cartilages taken out.

(FFFF) Cicatrice of the original wound, around the aperture.

B

This engraving represents the appearance of the aperture with the valve depressed.

(AAA) Edges of the aperture through the integuments and intercostals, on the inside and around which is the union of the lacerated edges of the perforated coats of the stomach with the intercostals and skin.

(B) The cavity of the stomach, when the valve is depressed.

(C) Valve, depressed within the cavity of the stomach.

(EEEE) Cicatrice of the original wound.

(F) The nipple.

C

This engraving represents a portion of the stomach prolapsed through the aperture, with the inner surface inverted, and spread out over the integuments of the side.

(AAAAA) Folds or rugae of the inner coats of the stomach.

(BBBB) Interstices, filled with mucous substance.

(C) The nipple.

(Figs. 5A, B, C, from Original Manuscript and Life and Letters of William Beaumont by MYER; William S. Middleton Memorial Medical Library, University of Wisconsin, Madison)

1832, when leave was granted to Beaumont by Col. Zachary Taylor.

The war was short, lasting from spring until the final action at the Bad Axe River, August 2, 1832. The correspondence and notebook entries are sparse during this period. It appears that Surgeon Beaumont was mainly concerned with

continuing his important experiments and that there was never an immediate concern at Fort Crawford of the war or epidemic.

Blackhawk, an elder in the Sac tribe (Fig. 8), led his people, including wives and children, east across the Mississippi to reoccupy former lands. The presence of women suggests motives

Fig. 6—Sauk and Fox Indians, typical of the Indians along the Wisconsin River. (From the American Heritage Book of Indians, pp 206-210, Ed. JOSEPHY, A. M., American Heritage Publishing Co., Inc., 1961)





Fig. 7—A scene at Prairie du Chien in August 1825, drawn by J. O. Lewis as part of an Aboriginal Portfolio in the Library of Congress. A grand council with the Chippewa, Sauk and Foxes, Menominee, Iowa, Sioux, Winnebago, Ottawa, and Potawatomi was held with government representatives to define the boundaries of their respective land claims. (From *The American Heritage Book of Indians*, pp 206-210, Ed. JOSEPHY, A. M., American Heritage Publishing Co., Inc., 1961)

other than a war party; indeed, there were few battles in this war, the major actions being when the troops caught up with the fleeing Indians.

The great fear of Indian uprising along the frontier prompted President Jackson to order his senior general, Winfield Scott, to move troops from the East to support the existing regular troops under General Henry Atkinson. It was the movement of these troops that probably caused 95% of the morbidity in the war and introduced cholera to the frontier.

During 1831 the cholera was epidemic in Europe, and by June 15, 1832, there was an outbreak in Quebec among 40,000 recent immi-

grants. Then, via upper New York state, the first case in New York City was reported on June 26. As the epidemic began there was a mass exodus of those who could afford to travel and the peak was reached about July 20.

The great fear of cholera was enhanced by its sudden onset; as one New York physician said, "The first symptoms appear with little or no warning. I felt no premonition of cholera at all until I pitched forward in the street as if knocked down with an axe." This was truly the first collective social disaster shared by all the people of the new nation alike.

The following extract of a private letter from a veteran officer of the army who was on board the "Henry Clay," besides giving an interesting description of the outbreak, pays a high tribute to the fidelity and efficiency of Assistant Surgeon Kerr:

"In 1832 the troops in New York Harbor and elsewhere were ordered to the west to act against the Sac and Foxes then hostile to us. Accordingly the Fourth Artillery embarked on the eighteenth of June for Chicago, via the Hudson River, the canal and lakes. The Asiatic cholera had then just made its appearance in Canada, but not yet in the United States, and all along the line of the canal to Buffalo we met evidence of panie and alarm among the citizens.

"We arrived without incident at Buffalo and sailed from thence on the third of July on the steamer Henry Clay, Assistant Surgeon Robert E. Kerr, a young officer, being our only medical



Fig. 8—A still-proud Black Hawk (right) and his son were painted by John Jarvis in 1833 when they visited the East as prisoners of war. (From *The American Heritage Book of Indians*, pp 206-201, Ed. JOSEPHY, A. M., American Heritage Publishing Co., Inc., 1961)

officer, and of him and not of our expedition I purpose to write.

"On the afternoon of the Fourth of July, after we had a Fourth of July dinner, being off the port of Erie, and while the young officers were joking about the cholera, the then prominent subject of thought, the hospital steward came into the cabin and reported to the doctor that one of the privates was taken suddenly very ill.

"We went on deck and found the man in great agony, and the doctor at once pronounced it a case of cholera. He took the case in hand and was unremitting in his attentions, but the man died at half past three the next morning. This was, I think, the first case in the United States, and the man came immediately from Baltimore and had never been where the cholera was.

"Before he died another case occurred, and during the night we arrived at Detroit, where we were visited by Dr. Everett and several citizen physicians who all pronounced the disease to be Asiatic cholera.

"General Scott ordered us to proceed about three miles up the strait, and there await his further orders. The next morning, having been joined by Dr. Everett, who was chief of General Scott's Medical Staff, we were ordered to proceed on our voyage.

"The cases at this time increased very fast, the first three being from Major Payne's company, but then it extended not only to the other troops but also to the crew, so that before we got to Fort Gratiot (Port Huron) the decks were covered with the dead and dying, and not enough men remained to navigate the vessel, so that the voyage was broken up and we landed about a mile below Fort Gratiot where we encamped.

"A heavy rain came on and the cases increased rapidly and among them Dr. Everett, so that Dr. Kerr was the only medical officer. The sick were removed to a neighboring barn, which was soon filled; I counted one morning in passing it, six dead bodies lying outside awaiting burial.

"The disease raged with unabated fury (including several officers among its victims, of which two, Dr. Everett and Lieutenant Clay died) until July 11th, when it began to abate though there were daily deaths for some time afterwards. Amid all these scenes, Dr. Kerr, unassisted, attended to officers and men both day and night, and I think never had the slightest relaxation during that time. His devotion to duty was the admiration, and his power of endurance the wonder of all.

"The last case was taken sick on the sixteenth, and the last death occurred on the twenty-first. We lost, I think, between forty and fifty, and I lost one-third of my company."

Stern measures were shortly in force as the cholera epidemic became a far greater threat to the army than the small band of Sac Indians hiding in the forest of northern Illinois. At a public meeting in Detroit, a sum of \$1,000 was raised to protect the village by barring all persons from Canada, inspection of all ships one-half mile down stream, and prevention of eating unripe cherries, apples and pears; and by publishing a daily cholera bulletin, "The Cholera Beacon."

Settlements along the Chicago road had armed guards, fences across roads, and no trespassing allowed to the point that the stage coach to Ann Arbor was turned back by the local colonel of militia. At Mackinac, General Scott went among the troops and noted that intemperance invariably led to the plague, so ordered that "any man found intoxicated should dig a grave his own size and contemplate it with understanding that if he persisted in drinking he would soon fill it himself."

Scott moved his troops, already more than half depleted, to Chicago. He wisely decided to isolate his troops and ordered General Atkinson in Wisconsin to pursue the Blackhawk tribe, thereby preventing spread to Fort Crawford and the Mississippi. He wrote, "I am fully aware of the heavy responsibility that rests upon one for the spread of a dreadful malady among the troops under my orders and through them prematurely among the population of this immense valley. I have never regarded myself as having been born to be a curse to my country."

The local scene in Chicago at the time was described in the travel journal of a young man—Chicago at that time 50 people, five buildings and Fort Dearborn. "The 14th of July was a day never to be forgotten. The night before a schooner landed at this place and brought word that the troops would be here in a day or two at most and this was hailed as an event that would terminate the war speedily . . . word was brought to us that the steamboat Sheldon Thompson had landed and brought the cholera. Fifteen had been thrown overboard after sundown. General Scott . . . was sick in the bakehouse next door and was not expected to live until morning. All was confusion. The troops were ordered out of the fort for the reception of sick soldiers and with frightened soldiers calling to each other,

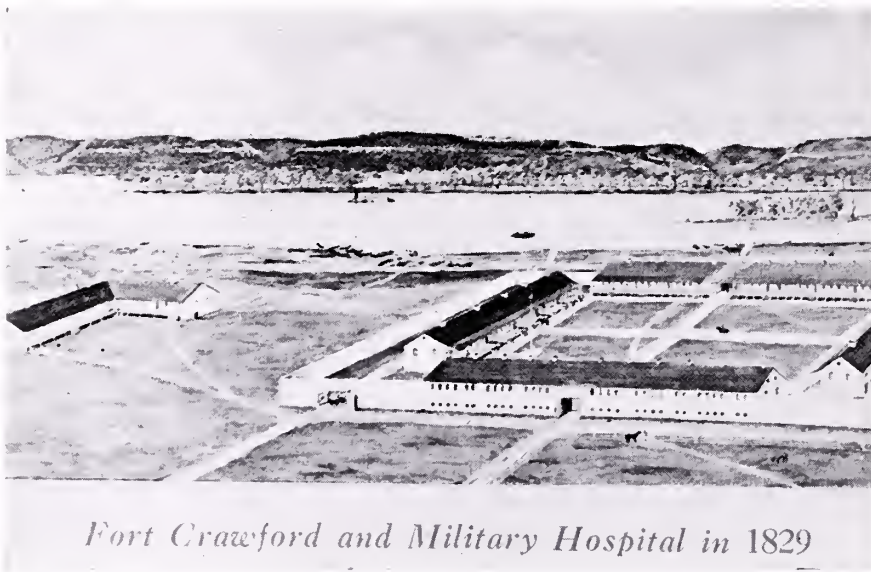


Fig. 9—Fort Crawford and the Hospital at the time of Beaumont's continued experiments on Alexis St. Martin and the interruption due to the Black Hawk War or "Cholera Campaign." From a painting in the Museum of Medical Progress at Prairie du Chien, Wisconsin. (Reproduced through courtesy of State Medical Society of Wisconsin, photo by Gordon Peckham, Museum curator)

Fort Crawford and Military Hospital in 1829

dogs barking, Indians hallooing rendered it an awful scene.

"... I shall always remember the scene. The prairie on one side with enemies on it at probably no great distance. The other, Lake Michigan, on it the dark steamboat, like a dark putrid mass for so it appeared according to the stories reported." Scott's isolation of the upper Mississippi forts was successful and the epidemic did not reach the area until later in 1832, probably by way of Cincinnati, St. Louis, and New Orleans.

It is little wonder that the fear associated with cholera so impressed the physicians and particularly Beaumont. The records of the war and Fort Crawford (Fig. 9) do not indicate the presence of cholera in Prairie du Chien at the time of Surgeon Beaumont's tenure, and the first cases reported from Galena were to occur after he left on furlough to Washington, D. C.

Much speculation as to the cause of the disease appears in the literature of the 1830s, and one member of the New York Board of Health Special Council proposed a reward of \$20 for any licensed physician who cured a case of cholera.

The filth and habits of the times were generally held to contribute to the spread of the disease. A New England physician remarked that not one in five of his patients bathed or washed their bodies in water once a year. A New York health official reported that street cleaning in the city was left to thousands of swine that roamed the streets plus goats and dogs and, facetiously, that the city water was far better

than any other, since it served as a purgative as well as for washing and cooking.

In one poll of 109 physicians, 90 thought the disease not at all contagious; 14 that it was non-contagious except under certain conditions; and 5 thought it contagious due to some substance of "Terrene" origin in the atmosphere, the latter thinking being the "miasmatisists."

Apparently there was a complete lack of sanitation in most frontier communities, prompting the populace to flee to the countryside during epidemics. Other traditions of the era played their part in spread of the plague, such as the custom of sopping, whereby in public houses and road taverns a central pot of meat and gravy was dipped into the chunks of bread by the guests seated about the table.

Beaumont recognized the importance of cleanliness at Fort Crawford when he reported. "The healthfulness and efficiency of the troops at this post are unprecedented within the limits of my recollections, and I cannot consistently with my own belief and in justice to the disposition and efforts of the commanding officer of the post (Major Kearny) forbear to observe the present extraordinary state of health and good condition of the troops."

A scribbled piece of paper, probably from Beaumont's notebook and probably written during this period, reads, "The greater proportional number of deaths in the cholera epidemic are, in my opinion, caused more by fright and presentiment of death than from the fatal tendency or violence of the disease. Like a snake, watching and mouthing its prey, the *cholera* lurks un-



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Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

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Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

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seen through the pestiferous pens and malarious atmospheres, stealing upon human beings and thickly populated places and gluts its cadaverous appetite more by the fear and dread it occasions than by its otherwise naturally fatal efforts upon human life."

During the next epidemic of 1849, Beaumont, retired and living in St. Louis, was to write specific therapeutic suggestions which included friction to increase circulation, opium, calomel, cupping, bleeding, and, but lastly . . . alkaline drinks.

The free use of alkaline drinks is very useful in all stages of the disease. However, he expressed the futility of many physicians attempting to slow the epidemics when he wrote, "Relatives and friends shrink with sorrowful emotions, and doctors stand aghast in mute astonishment and mortification at the relentless rapidity of a disease so little understood and over which their most profound skill and judgment and professional efforts can have no salutary influence or effect—a disease which I conceive to be sui generis of atmospheric origin, sent by God over the face of the earth to scourge mankind."

How close and yet so far were many physicians during the early epidemics of cholera. The accepted treatment always contained calomel in some plan with bed rest, tea, and bleeding in the late stages. Daniel Drake advised these plus advice to go to bed and send for your family physician—terror is a great exciting cause of the disease and requires treatment.

He described the blood in cholera as black, pitchy and coagulates loosely, is deficient in serum, and often has the same qualities in arteries and capillaries as the veins. The calomel and opium were usually mixed with brandy and taken generously three or four times daily or given straight in a "thumping" dose. The epitome of this was the Calomel Poem:

*The man in death begins to groane
The fatal job for him is done
His soule is wing'd for heaven or hell
A sacrifice to Calomel
And when I must resign my breath
Pray let me die a natural death
And bid you all a long farewell
Without one dose of Calomel*

Therapy in general was poor. Sir Thomas Watson, a great English physician, said, "If the balance could be fairly struck, and the exact truth ascertained, I question whether we should find

the aggregate mortality from cholera, in this country, was any way disturbed by our craft."

Several remarkable discussions about the deficiency of salts in cholera blood and the use of intravenous saline were written by Stevens of London, 1832; Brigham of Hartford, Connecticut, 1832; and Joslin of New York, 1835. They emphasize the severe dehydration and need of fluids but underestimate the true need of fluids by many liters. Two tablespoons of salt in 6 ounces of warm water given by mouth is noted to cause emesis but improvement in some.

One moribund patient treated in New York by the injection into the vein of a salt solution was observed; the circulation was restored, the temperature increased, and cold perspiration converted to an animating warmth. Of 226 cases treated by the saline treatment in London, there were 200 recoveries, which was considered an improvement from an expected 50% mortality.

A Mr. Smart of Cranborne (1821) is given credit for devising the operation of intravenous injection.

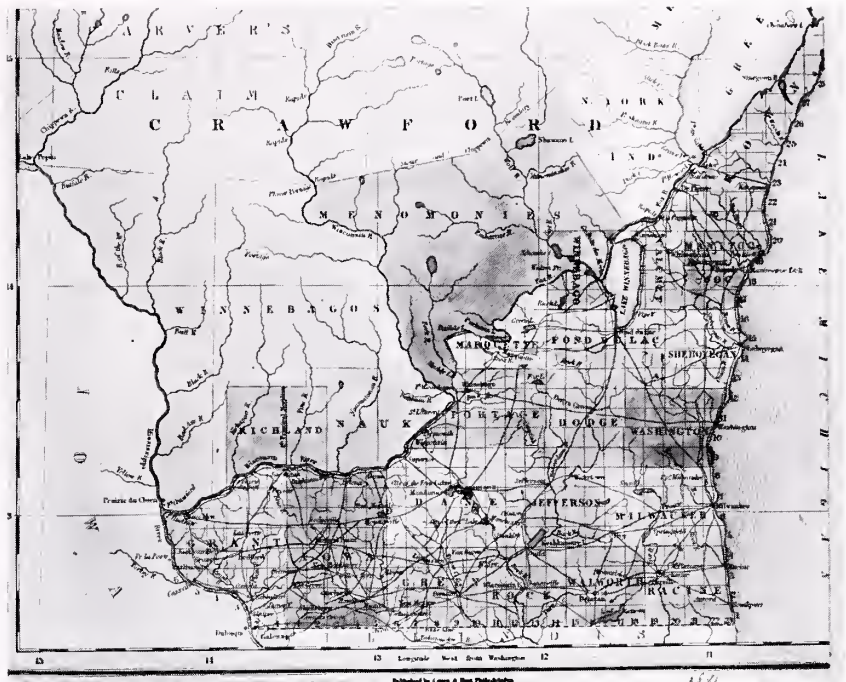
Many great physicians, including Beaumont, during the first epidemics of cholera apparently were thinking of saline replacement, but none were quite able to comprehend the actual tremendous salt depletion of cholera. Had a person like Beaumont had more exposure to eases and the time to study and observe free from the confusion and fears of the epidemic, he might have made another great contribution.

The concepts that enabled John Snow to later construct a meaningful theory of cholera causation, the statistics that helped him in validating his ideas, the public health organization that could put his knowledge to use, did not exist in 1832.

William Beaumont, the Blackhawk War, and the 1832 cholera epidemic were intimately intermeshed in the Michigan Territory (Fig. 10). Surgeon Beaumont perhaps just missed a second place in medical history for important observations on the cause and treatment of cholera. The Blackhawk War took second place to the cholera epidemic and cost the government \$2,000,000.

The Sac tribe ceded the eastern fifth of what is now the state of Iowa in trade for \$20,000 for 30 years; a blacksmith shop; 40 kegs of tobacco; and 40 kegs of salt. Chief Blackhawk was imprisoned shortly but gained a grand tour of eastern cities, including an audience with the president. The cholera claimed the lives of 250 settlers and about 100 regular army troops in the northwest.

Fig. 10—The Wisconsin map of 1841 shows the marked increase of new settlements in the new territory. Madison was designated the capital in 1837 by the territorial legislature. The population of 31,000 was mainly along the Wisconsin River route and the Dodgeville-Mineral Point lead-mining region. [Published by Carey and Hart, Philadelphia.] (From author's collection)



And lastly, the Michigan Territory was surveyed after the war with the final report: "The amount of tillable land in two million acres is less than 1/100 of the area. This land of bogs, lakes and swamps is not worth the expense of further surveying."

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Thursday, April 15

- 11:00 AM Registration of Delegates.
- 1:30 PM House of Delegates Meeting, opening session.
- 4:30 PM Reference Committee Meetings.

Friday, April 16

- 8:00 AM Registration.
- 9:00 AM *Medicare-Medicaid, Why the High Cost?* (Panel Participants and Moderator to be announced.)
- 10:30 AM Intermission to view exhibits.
- 11:00 AM Continuation of *Medicare-Medicaid Program*.
- 11:00 AM *Parkinson's Disease* (Sponsored by St. Louis Society of Neurological Sciences.)
 Panel Participants:
The Effects of L-Dopa on Parkinson's Disease, George H. Klinkerfuss, M.D.,
 St. Louis.
Surgical Aspects of Parkinson's Disease, Claude Bertrand, M.D., Montreal,
 Canada.
- 12:00 Noon MSMA Maternal Welfare Luncheon (Sponsored by the Missouri Obstetrical and
 Gynecological Society.)
 University of Missouri Alumni Luncheon.
- 2:00 PM *Drinking, Drugs, Dropping Out and Dissent* (Sponsored by the Missouri
 Academy of Psychiatry.)
 Moderator: David Davis, M.D., Columbia, President, Missouri Academy of
 Psychiatry.
Biological and Behavioral Aspects of Alcoholism, Jack H. Mendelson, M.D.,
 Boston, Mass.
 Panel Participants:
 R. Raymond Knowles, M.D., St. Louis.
 Donald W. Goodwin, M.D., St. Louis.
- 2:00 PM *Organization for Emergency Department Care*.
 Moderator: Oscar P. Hampton, Jr., M.D., St. Louis, Assistant Director, Trauma
 Activities, American College of Surgeons.
 Panel Participants:
 J. Cuthbert Owens, M.D., Denver, Colo.
 Louis P. Hetlage, M.D., Troy.
- 2:45 PM *Induction of Ovulation*, James C. Warren, M.D., Kansas City, Kan. (Sponsored
 by Missouri Obstetrical and Gynecological Society.)
- 3:30 PM Intermission to View Exhibits.
- 4:00 PM House of Delegates, second session.
- 5:30 PM Missouri State Medical Foundation Annual Meeting.
- 6:00 PM Reference Committees.

Saturday, April 17

- 8:00 AM Registration.
- 9:00 AM Program on Sex.
 (Panel Participants and Moderator to be announced.)
- 9:00 AM *Symposium on Coronary Artery Disease* (Jointly sponsored by Missouri State
 Surgical Society and Missouri Heart Association.)
 Moderator: Brent M. Parker, M.D., President, Missouri Heart Association.
 Panel Participants:
Indications for Coronary Arteriography, J. Gerard Mudd, M.D., St. Louis.
Medical Therapy for Angina Pectoris, Gerald A. Wolff, M.D., St. Louis.
Surgical Therapy—Coronary Artery By-Pass Grafts, George C. Kaiser, M.D.,
 St. Louis.

Carotid Sinus Nerve Stimulator Implantation, Arthur E. Baue, M.D.,
St. Louis.

10:30 AM Intermission to View Exhibits.

11:00 AM Panel on *X-Ray Negative Upper GI Bleeding*.

Moderator: Edward D. Kinsella, M.D., St. Louis.

Panel Participants:

The Role of the Surgeon, Walter F. Ballinger, M.D., St. Louis. (Sponsored
by the Missouri State Surgical Society.)

The Diagnosis of Upper Gastrointestinal Bleedings by Angiography, P. Ru-
ben Koehler, M.D., Salt Lake City, Utah. (Sponsored by Missouri Radio-
logical Society.)

Contribution of Endoscopy to the Diagnosis of Upper Gastrointestinal Bleeding,
John F. Morrissey, M.D., Madison, Wisc. (Sponsored by Missouri Society of
Internal Medicine.)

11:00 AM Program on *Ophthalmology*, H. Saul Sugar, M.D., Detroit, Mich. (Sponsored by
Missouri Ophthalmological Society, Inc.)

Moderator: Robert C. Drews, M.D., Clayton.

11:45 AM Panel on *Otolaryngology*.

Moderator: Joseph H. Ogura, M.D., St. Louis.

Panel Participants:

The External Ear-1971, Donald G. Sessions, M.D., St. Louis.

Cervical Maxillofacial Trauma, Mark May, M.D., St. Louis.

Highlights in Treatment of Head and Neck Cancers, Joseph H. Ogura, M.D.,
St. Louis.

12:30 PM General Luncheon.

Fifty-Year Club Luncheon.

Missouri Ophthalmological Society Luncheon.

2:30 PM *Different Systems for Delivery of Health Care*.

Moderator: George H. Ladyman, M.D., Poplar Bluff.

Panel Participants:

National Health Insurance, Mr. Robert J. Myers, Silver Spring, Maryland.

Group Practice, Edward M. Wurzel, M.D., Executive Director, American
Association of Medical Clinics, Alexandria, Va.

Prepaid Plans, C. C. Cutting, M.D., Executive Director, The Permanente
Medical Group, Oakland, Calif.

2:30 PM Program on *Immunology* (Sponsored by Missouri Chapter, American Academy
of Pediatrics.)

Moderator: Francis X. Lieb, M.D., St. Louis.

Panel Participants:

James D. Cherry, M.D., St. Louis.

(Second Participant to be selected.)

3:15 PM *Immunosuppressive Drug Therapy in Connective Tissue Diseases*, William E.
Reynolds, M.D., Medical Director, The Arthritis Foundation, New York, N. Y.

Moderator: Robert H. Ramsey, M.D., Florissant.

Panel Participants:

Lester E. Wolcott, M.D., Columbia.

Jack Zuckner, M.D., St. Louis.

Sherwyn J. Wayne, M.D., St. Louis.

(Sponsored by the St. Louis Rheumatism Society.)

4:00 PM Intermission to View Exhibits.

6:30 PM Social Hour for those attending the Banquet.

7:15 PM Annual Banquet in Honor of Past Presidents of MSMA.

Guest Speaker, Russell B. Roth, M.D., Erie, Pa., Speaker of the House of
Delegates, American Medical Association.

Sunday, April 18

7:30 AM House of Delegates Meeting, breakfast and final session.

Have You Made Your Reservations?

April 15-18

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The federal government now has the authority to expand the U. S. Public Health Service to provide direct medical and other health care services in ghettos and rural areas where there are shortages of physicians and other health personnel.

Before such a program can be started, the state and local medical society must certify that it is needed.

The Senate approved the authorizing legislation, 66 to 0, and the House by an almost unanimous voice vote. President Nixon signed it into law on Dec. 31, 1970, although the secretary of Health, Education and Welfare and the PHS surgeon general had asked Congress to defer action until the President had presented his overall health program early this year.

The legislation authorized \$10 million for the current fiscal year ending next June 30, \$20 million for fiscal 1972 and \$30 million for fiscal 1973. The money must be appropriated before it is available for the program.

In its report approving the legislation, the House commerce committee expressed a hope that it would help revitalize the PHS which the Nixon Administration reportedly has been planning to further downgrade, or even eliminate, in a reorganization of the health activities of HEW.

"That the Public Health Service has been allowed to languish and that the great functions it has performed have largely been stripped from it is the fault of this and previous administrations and a tragedy from the standpoint of the nation's health needs," the committee report said.

Physicians enlisting in the program will become PHS commissioned officers and, as such, be exempt from the military draft. Fees paid for their services

will be set by the HEW secretary and go into the U. S. treasury.

The HEW secretary has the responsibility of determining, after consultation with local officials and health groups, what areas need such a program. He then can assign PHS personnel there after receiving a request from a state or local health agency or other public or nonprofit private health organization and a certification of need from the state and local medical society.

The new law—the "Emergency Health Personnel Act of 1970"—also provides for the establishment of a 15-member National Advisory Council on Health Manpower Shortages. It will include three members from the health professions, three members from state health or health planning agencies and four from the general public representing consumers of health care.

Three major reports before the federal government urge extensive programs to combat cancer and heart disease.

A special panel of 26 expert consultants, in a report to the Senate Labor and Welfare Committee, urged a multi-billion dollar crusade against cancer in an effort to erase its "staggering" impact of death and suffering caused by the disease.

The National Advisory Cancer Council urged increased educational efforts by both governmental and private agencies to warn the public against the hazards of smoking.

The Inter-Society Commission for Heart Disease Resources recommended a program that would promote drastic changes in the nation's dietary habits, elimination of cigarette smoking and research into the causes of high blood pressure.

The latter two bodies were set up by the Department of Health, Education and Welfare. The heart disease commission is made up of more than 100 experts in cardiovascular disease, epidemiology, radiology, rehabilitation and surgery from 29 medical organizations, including the American Medical Association, the American Heart Association, the American Nurses Association, the American Hospital Association and the College of Cardiology.

Based on a four-month study, the cancer report to the senate committee included an estimate that 50 million Americans now living will develop the disease and that 34 million of them will die unless immediate steps are taken to curb it.

The consultants recommended a sweeping program keyed to consolidation of all existing cancer research projects into a national cancer authority directly responsible to the president.

"The Committee is unanimously of the view that



"Feeling better?"

the conquest of cancer is a realistic goal if an effective national program along the lines in the report is promptly initiated and relentlessly pursued," said Benno C. Schmidt, co-chairman of the group.

The report recommended doubling cancer research spending to \$400 million in the 1972 fiscal year and increasing it by \$100 million to \$150 million in subsequent years to a \$1 billion level in 1976.

The panel of consultants, which included labor and civic leaders as well as distinguished cancer researchers, said that the program should be devoted primarily to research into the causes and cures of cancer, rather than to patient care.

The National Advisory Cancer Council's fourth annual report on the state of the art in cancer research cited the more than 60,000 deaths a year in the United States from an "epidemic" of lung cancer attributed mainly to cigarette smoking. The report dealt with the chemical causes of cancer and the effects of many environmental factors, not only the "private pollution" of smoking but, also, the more public air pollution from industrial and commercial wastes as causative agents in malignant disease.

As of January 2, a ban on all advertising of cigarettes on television and radio became effective under legislation approved in the Congress, and all packages of cigarettes manufactured and sold in the United States now must carry a new printed warning: "The Surgeon General has determined that cigarette smoking is dangerous to your health." This replaced the milder warning required by a 1965 law that expired in 1969 which said, "Caution: cigarette smoking may be hazardous to your health."

Although a substantial portion of this report of the Council was devoted to the problem of smoking and health, it was stated that the production of cancer by chemicals is part of a larger problem of the hazards facing man in a polluted environment. The report pointed out that the death rate from cancer continues to increase despite steady improvement in the cure rate, and suggested that this may be related largely to increased exposure of the population to cancer-causing agents in the environment.

The heart disease commission's report said the nation's cholesterol-rich diet, cigarette smoking and high blood pressure are the primary reasons for one million heart attack deaths and 600,000 heart disease deaths in the United States annually. The report cited five secondary factors: obesity, diabetes, tensions, sedentary living and heredity.

The commission urged "safe and reasonable" changes in everyone's diet to reduce saturated fats and cholesterol even though present evidence that such dietary changes would help is now "suggestive" rather than "conclusive." In an effort to obtain "conclusive" evidence, the commission's experts recommended large-scale, federally-financed scientific studies of American eating habits and their consequences in terms of heart-artery health or illness. The commission envisaged studies costing about \$80 million, requiring ten years and involving some 60,000 persons on typically high-fat diets as subjects.

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Dr. R. Dean Wochner has been named acting director of health and hospitals for St. Louis by **Mayor Alfonso J. Cervantes**. Doctor Wochner replaces **Dr. Herbert R. Domke**, who resigned from that position to become acting director of the Missouri Division of Health. Doctor Wochner, 34, taught internal medicine at Washington University and has been chief of the Washington University Medical Service at City (Starkloff) Hospital in St. Louis. He has been active in various committees at City Hospital and elsewhere and was elected president of the hospital's medical staff a year ago. In addition, he has been a member of the Mayor's Hospital Long Range Planning Committee, the Central Society of Clinical Research, the American Rheumatism Association, the St. Louis Medical Society and is a member of the board of directors of the Institute for Medical Education and Research.

Dr. John H. Tatom, Poplar Bluff, is one of 23 persons who were commissioned to overseas service on Dec. 10, 1970 by the Southern Baptist Foreign Mission Board in Richmond, Va. Doctor Tatum, who has practiced surgery at the Doctors Hospital in Poplar Bluff for three years, expects to be assigned to a Baptist Hospital in Indonesia.

Dr. Ruth Seevers, Osceola, the first woman to be licensed as an M.D. in Missouri, has been reelected to the board of St. Clair County Hospital District (No. 1) by unanimous vote.

Dr. Walter R. Peterson of Kansas City, physician and surgeon, received a high honor recently when he was inducted into the International College of Surgeons during the college's annual convention in Las Vegas, Nev. The induction of Doctor Peterson was unusual in that it was by invitation instead of application.

Dr. Kenneth V. Larsen, St. Louis, has been elected president and chief-of-staff at Missouri Baptist Hospital in St. Louis. Other newly-elected officers are **Drs. Charles A. Molden**, vice-president and associate chief-of-staff; **Jacques P. Schaerer**, secretary; and **William B. Hutchison**, who was reelected treasurer.

Dr. William M. Komanetsky has been installed as president of the St. Louis Academy of General Practice. He succeeds **Dr. Robert G. Hughes** of St. Louis. Doctor Komanetsky was graduated from Creighton University Medical School, Omaha, and has been in the practice of medicine in St. Louis since 1953.

Dr. Solomon Garb, who is on leave of absence from the University of Missouri Medical Center in Columbia, is a member of the 26-man panel of medical and financial experts which made a report to Congress recently on its five-month cancer study. The panel, noting cancer's toll of 320,000 lives in 1969, said that more than 34 million Americans now living will die of cancer unless medical researchers get the money they need to defeat the disease. The team of consultants, named in June, 1970 by the Senate Labor and Public Welfare Committee to propose new ways to fight cancer, gave that committee a report that said that nothing short of a "top priority commitment" will accomplish the job.

Dr. Kirby L. Turner, Potosi, has been appointed chairman of the 1971 Heart Fund Campaign in Washington County. **Dr. Brent Parker**, president of the Missouri Heart Association, announced that the campaign will be conducted in more than 8,500 American communities during February. The Heart Fund drive will reach its high point on Heart Sunday, February 21, when thousands of volunteers will conduct a door-to-door campaign.

Dr. Sam Farrell of Washington is the new president of the medical staff at St. Francis Hospital. Other officers who were elected recently are **Drs. George Richardson**, Union, vice-president, and **Joseph Murney**, Washington, secretary-treasurer. **Dr. Robert Moellenhoff** of Washington is the retiring president.

George Mandler, M.D., has been elected chief-of-staff by the medical staff of the Chillicothe Hospital for 1971. **J. R. Henry, D.O.**, is the newly-elected vice-chief-of-staff and **Mr. Paul Shelton**, hospital administrator, was reelected secretary-treasurer for the fifth successive year.

Dr. Joseph H. Ogura of Washington University School of Medicine is one of ten medical educators and researchers who have received 1971 Distinguished Achievement Awards from *Modern Medicine*. Doctor Ogura, professor and head of the University's Department of Otolaryngology, was among approximately 250 men and women nominated for the prestigious awards which have been given annually since 1934. He is cited for his refinement of laryngeal cancer surgery to preserve swallowing and speech functions.

Correction, please. **Dr. Jack Vineyard** is now director of emergency service at St. John's Medical Center in Joplin, not in Springfield as reported in the January, 1971 issue of this Journal. Doctor Vineyard formerly practiced medicine in Carrollton.

Dr. George Callman, director of the Detached Unit female ward at St. Joseph State Hospital, was honored recently by the employes of the hospital in recognition of his 50 years in the practice of medicine. **Dr. Liam O'Brien**, superintendent of the hospital, presented Doctor Callman with a bronze plaque commemorating the event. Doctor Callman graduated from medical school at the University of Berlin in 1920, but had actual experience as a physician in the German army during World War I while still a student. He practiced in Israel from 1949 to 1952 when he came to the United States and set up his practice in New York. He joined the staff at St. Joseph State Hospital in 1959.



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Missouri Medicine

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DEAN F. TAMISIEA, M.D. *and*
JOHN B. SHIELDS, M.D., *St. Louis*

A Pulsating Anterior Chest Mass

A Radiographic Exercise

A 50-YEAR-OLD white man was referred to this hospital for evaluation of a pulsating anterior chest wall mass. The initial clinical impression was an aneurysm eroding through the sternum. The lesion had been present for about a year, slowly increasing in size, and was painless. Physical examination disclosed a well circumscribed 10 cm x 8 cm x 2 cm mass protruding from the upper sternal area. The mass pulsated synchronously with systole and had an audible bruit (Fig. 1).

The chest roentgenogram revealed a soft tissue density superimposing the superior portion of the sternum. Zonograms of the manubrium sterni demonstrated destruction limited by and not crossing the joints of this structure (Fig. 2). Infectious processes commonly are not delimited by joint spaces and if the mass were an infectious process, it would be expected to have crossed at least one of the joint spaces. The possibility of erosion by an aortic aneurysm, as this mass was originally thought to be, appeared highly unlikely; again, there was no reason for pressure necrosis to be delimited by the joint spaces. Subsequently, an aortic arch study demonstrated extensive vascularity of the mass, well demonstrating its primary blood supply from the internal mammary arteries and further excluding the possibility of an aortic aneurysm (Fig. 3).

An intravenous pyeloureterogram was obtained (Fig. 4). This outlined a somewhat en-

larged right kidney with the upper and middle calyces distorted and displaced by a mass lesion. Selective renal arteriography (Fig. 5) revealed a highly vascular tumor involving the entire upper two thirds of the right kidney with some extension laterally beyond the capsule.

Further investigations included radioisotopic studies of the tumor, the thyroid gland and the kidneys. Localization of the tumor was made following injection of chlormerodrin 203. Scanning of the mass revealed it to concentrate the isotope well and demonstrated it to be separate

The authors discuss a case of a silent renal cell carcinoma presenting as a metastatic pulsating mass of the manubrium sterni. The knowledge that pulsatile bone tumors often represent metastatic renal or thyroid cancers will direct the physician's attention to diagnostic studies of these organs. In this case, the diagnosis rested upon the appropriate roentgenographic procedures, including an aortic arch study and renal arteriogram. The authors are from the Departments of Radiology, John Cochran VA Hospital, where Dr. Tamisiea is a Resident, and the St. Louis University School of Medicine, where Doctor Shields is an Assistant Professor.

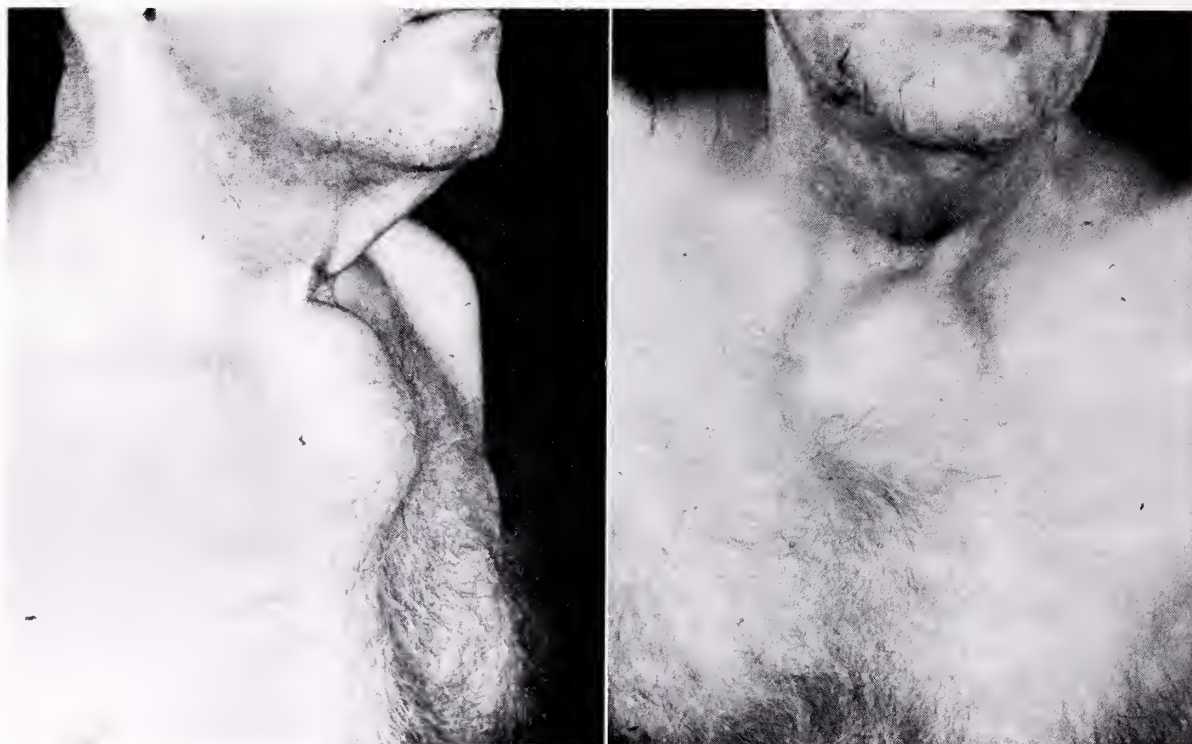


Fig. 1 The mass overlying the superior mediastinum is clearly visualized (left and right).



Fig. 2 Zonogram of manubrium sterni. Destruction of the manubrium is seen with associated preservation of joints.

from the thyroid gland. Thyroid scanogram showed a normally shaped, slightly enlarged gland, but in a very abnormal position, being displaced by the sternal tumor. The right kidney

scan further delineated the kidney tumor.

A right nephrectomy was performed. Pathologically, the tumor was confirmed as a hypernephroma with extension into the renal vein and pericapsular tissues. Subsequently, the patient underwent radiation therapy to the sternal mass. A total of 4,000 rads has been given to the metastatic lesion with only minimal reduction in its size.

The five-year survival rate following surgery and radiation is not more than 35%. Invasion of the renal vein, size of the tumor, the degree of anaplasia and the extent of distant metastases materially affect the prognosis. Thus, large anaplastic masses with invasion of the renal vein and bone or lung metastasis yield a 5% to 10% five-year survival.¹

DISCUSSION

The sternum has been the site of both primary malignant and benign tumors as well as metastatic lesions. Secondary tumors are most common and comprise approximately 70% of all sternal neoplasms.² The diagnostic possibilities are narrowed considerably when the sternal mass pulsates. With this feature present, primary attention should be directed toward metastatic metastases from either the kidney or thyroid gland.^{3, 4} There have been, however, isolat-



Fig. 3 Aortie arch study. The arch is normal. The well vascularized tumor mass is seen as well as its blood supply from the internal mammary arteries.

ed reports of plasmacytoma, malignant heman-
gioma, benign giant cell tumors and infrequent
other neoplasms of bone presenting in a similar
fashion.⁵ Bone metastasis from renal cell carci-
noma and thyroid carcinoma are relatively com-
mon and frequently present as the initial clin-
ical manifestation.^{4, 6} The osseous metastases
from these primary foci may be solitary. The
principal pathologic feature of pulsating thy-
roid and renal metastasis is the extreme vascu-
larity. These vascular spaces have liberal com-
munications with the arterial supply. The devel-
opment of pulsations is dependent upon the lo-
cal blood supply to the tumor. Those that estab-
lish a communication with a large nutrient ar-
tery or one of its major branches will pulsate.⁴

Oftentimes, such pulsating bone masses have
been mistaken for arterial aneurysms, especially



Fig. 4 Intravenous Pyloureterogram—A normal left kidney is seen. Mass lesion displacing superior and middle calyces of right kidney is evident.

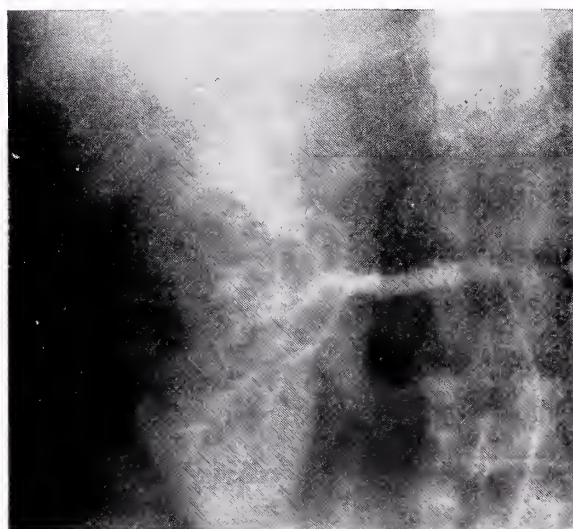


Fig. 5 Selective Renal Arteriography. The tumor mass of the kidney is clearly delineated.

when situated adjacent to major arterial trunks. This was the initial clinical impression in our case. They frequently do present classical signs of aneurysm, i.e., a systolic expansile pulsation with thrill and bruit. In such cases, angiography is capable of visualizing the normal artery and the distinct vascularity of the contiguous tumor.⁷ It is interesting to note that most cases of meta-
static sternal tumors reveal the posterior cortex of this structure intact without extension into the mediastinum. The anterior cortex on the other hand is most often destroyed with spicules of bone projecting beyond the surface.⁸

CONCLUSION

Renal cell carcinomas are interesting diagnos-

(Continued on page 111)

Sarcoidosis

Case Report

SINCE BOECK's early description of sarcoidosis, this systemic granulomatous disease has continued to intrigue and challenge clinicians. Both the epidemiologist and the immunologist have become involved, as well. This disorder, which occurs without regard to geography or race, may affect one or more organs of the body.

While different etiologic concepts have been offered, the nontuberculosis mycobacteria have been attracting attention because they have been found in the tissue sections of patients with sarcoidosis. This is a case study of sarcoidosis co-existing with sputum cultures containing mycobacteria of Battley (Group III) type, but in which lung, liver, scalene node and bone marrow yielded no acid fast bacilli on sections or special culture media.

CASE REPORT

A 26-year-old white man entered the Missouri State Sanatorium in June, 1968, because of a three-month history of exertional dyspnea, constant aching pain in the mid-sternal area, fatigue and weakness.

The examiner described a man weighing 209 pounds. His blood pressure was 130/80 mm/hg; pulse rate, 96 per minute; respiratory rate, 20 per minute. The liver was enlarged and the spleen palpable. There were no other abnormal signs.

Chest roentgenogram showed bilateral hilar adenopathy and bilateral diffuse linear and nodular infiltration. Tuberculin skin tests, utilizing intermediate PPD, were negative. Initial laboratory findings are presented in Table 1.

In this discussion of current concepts of sarcoidosis, a topic of increasing interest, the authors include an illustrative case report of a patient with pulmonary sarcoidosis and associated pulmonary infection with Group III mycobacteria. Drs. Kozdereli and Galinsky are Staff Physicians and Dr. Brasher is Superintendent and Medical Director, Missouri State Sanatorium.

Sputum cultures for mycobacteria grew Group III organisms. Needle biopsy of the liver presented non-caseating, chronic granulomas suggestive of diffuse granulomatosis. Special stains demonstrated no acid-fast bacilli or fungi. Rectal mucosal biopsy and biopsy of the right scalene nodes were normal, but open biopsy of the lower lobe of the right lung revealed numerous discrete granulomas consisting of collections of epithelioid cells and multi-nucleated giant cells, both of foreign body and Langhan's type. The cell collections showed no areas of necrosis. Special stains revealed no fungi or acid-fast bacilli. Cultures from bronchial lavage, bone marrow and biopsy materials grew no organism.

Initial therapy with 1 gm of streptomycin administered intramuscularly daily and 3.5 gm of pyrazinamide (PZA) received orally was changed, when the mycobacteria were identified, to 900 mg of isoniazid, 1,200 mg of ethambutal and 1,000 mg of ethionamide in divided doses daily. Sputum cultures converted to negative 45 days later and remained so. After pulmonary biopsy, which established the diagnosis of sarcoidosis, steroid therapy was started with 30 mg of prednisone every other day and the patient was discharged.

After seven months of steroid therapy, the patient was readmitted for evaluation. He was asymptomatic. Physical examination revealed Cushingoid appearance, but otherwise was negative. Tuberculin skin tests were repeated and were still negative. The laboratory data are included in Table 1. Chest roentgenogram showed complete resolution of the parenchymal involvement and, also, reduction of the hilar adenopathy. Sputum cultures continued to be negative.

DEFINITION

Sarcoidosis presents itself in various ways, largely depending upon the organs involved, although symptoms do not occur until there is extensive parenchymal involvement. At present, the disorder is best characterized by its histology: "granulomatous masses of epithelioid cells (frequently giant cells) clustered together in multicentric tumor-like masses of variable size."¹ This histopathologic picture is simulated by the granulomas of tuberculosis, berylliosis and fungal infections. Other detailed ultrastructural

TABLE 1

Test	June, 1968	November, 1969
PULMONARY FUNCTION TEST		
FVC	3672 cc, 82%	4094 cc, 91%
FEV ₁	3026 cc, 82%	3194 cc, 78%
MVV	173.5 L/M, 127%	211.4 L/M, 155%
ARTERIAL BLOOD GAS		
(at rest)		
pH	7.415	7.45
pO ₂	48.	70.
pCO ₂	43.5	33.
O ₂ Saturation	83.5%	94%
(after exercise)		
pH		7.41
pO ₂		98.
pCO ₂		29.
O ₂ Saturation		97.1%
(after 100% O ₂ inhalation)		
pH	7.452	7.47
pO ₂	99.	530.
pCO ₂	35.	32.
O ₂ Saturation	97.5%	100+ %
IMMUNOELECTROPHORESIS		
IgG	Normal	Normal
IgA	Normal	Normal
IgM	Increased	Normal
White blood count	3828	6615
Alkaline Phosphatase	1.63 BU	2.5 BU
Calcium	10 mg%	9.1 mg%
Albumin	3.54 gm%	4.65 gm%
Globulin—Alpha	.75 gm%	.69 gm%
Beta	1.28 gm%	.97 gm%
Gamma	2.26 gm%	1.25 gm%
Sedimentation Rate	11 mm	7 mm

and histochemical findings were disclosed at the Fifth International Conference on Sarcoidosis in June, 1969.²

EPIDEMIOLOGY

Increased awareness of the disease has resulted in its more frequent recognition throughout the world. The highest prevalence is in Sweden, with 64 cases per 100,000 population. Other rates reported (in cases per 100,000 population) are London, 24; Berlin, 30; Poland, up to 5; Hungary, up to 40. Sporadic cases have occurred in Switzerland, Wales, Yugoslavia and Turkey.²⁻⁴

Efforts to correlate sarcoidosis with personal history or with environmental features have been unconvincing. Terris and Chaves⁵ found no association of sarcoidosis with geographic

factors.

Intrafamilial occurrence of sarcoidosis is rare. Sugiyama *et al*⁶ reported two additional instances and their review of literature revealed "only 40 familial incidences between 1923 and 1960." In the recent International Conference on Sarcoidosis,² Doetors Beskow and Wiman reported "one family in which 11 members of two generations had hilar adenopathy and parenchymal infiltration" and "two other families in which three members of the same generation were so afflicted."

The disease is slightly more common among females than males in young adults and usually becomes evident in the third, fourth and fifth decades of life.

In the United States Army, an increased incidence has been seen in Negro soldiers.

ETIOLOGY

The cause of sarcoidosis is unknown. Because the histologic appearance and clinical course resemble those of tuberculosis, sarcoidosis was at one time thought to be a sequel of tuberculosis. During the Fifth International Conference on Sarcoidosis,² arguments for and against the tuberculosis origin of sarcoidosis continued. More recently, anonymous mycobacteria have attracted attention as possible primary inciting agents in sarcoidosis. Mankiewicz⁷ found that "patients with sarcoidosis often harbor in their stools and tissues bacteriophages that lyse mycobacteria but rarely have phage-neutralizing antibodies, in contrast to tuberculosis patients who harbor both mycobacteriophage and phage-neutralizing antibodies and normals who rarely have either. When phage-neutralizing antibodies were added to tissue of patients with sarcoidosis, anonymous mycobacteria would be cultured after two to three months' incubation."

Some investigators report the culture of anonymous mycobacteria from sarcoid tissue.⁸⁻¹⁰ In the case here presented, biopsied tissue from lung, scalene node and liver, as well as bone marrow, yielded no acid-fast bacilli on special culture media, although mycobacteria, Battey type, were cultured from the sputum.

Geographic distribution suggested a relationship between exposure to pine pollen and the development of sarcoidosis. But, in an experimental study in rabbits by Hagerstrand and Linell,¹¹ intratracheal instillation of pollen produced no sarcoid-like epithelioid granulomas in the lungs. Subcutaneous injection did not cause lymphadenopathy.

Terris and Chaves⁵ could detect no association of sarcoidosis with exposure to pine forests, chewing sap, pitch or resin, clay-eating or exposure to specific crops or animals.

In summary, no single etiological factor for sarcoidosis has been established.

CLINICAL PICTURES

The manifestations of sarcoidosis in symptom-free individuals frequently come to notice through mass miniature chest roentgenograms. The leading constitutional symptoms are those common to chronic infections—weight loss, fever, weakness. Among pulmonary symptoms are cough, shortness of breath, chest pain and hemoptysis. Other symptoms are related to the involvement of individual organs or organ systems. Rarely, sarcoidosis may be associated with

myocardial dysfunction,¹² facial paralysis,¹³ massive swelling of the lower extremities,¹⁴ pericarditis with pericardial effusion¹⁵ or cranial neuropathy.¹⁶ The more usual localizations, of course, are the intrathoracic region, peripheral lymph nodes (60%-90%), skin, liver and bones, with characteristic cystic changes of the phalanges.

LABORATORY FINDINGS

Leukopenia, eosinophilia, elevated alkaline phosphatase and calcium levels and anemia occur in from 10% to 50% of the cases, but have no diagnostic reliability. When sarcoidosis affects the pulmonary parenchyma, the changes are reflected in pulmonary function and diffusion determinations.

Serum protein abnormalities¹⁷ in sarcoidosis point toward a stepwise increase of Alpha II, beta and gamma globulins which Osada *et al*¹⁸ have referred to as "Sarcoid Steps."

IMMUNOLOGIC ABERRATIONS

Patients with sarcoidosis demonstrate certain interesting immunologic features.¹⁹ Among these is depression of delayed skin hypersensitivity reactions resulting in a negative response to tuberculin skin tests.

In Europe, the onset of sarcoidosis is frequently heralded by the appearance of erythema nodosum which usually reflects a sensitization to a variety of infections and drugs and in some patients with early sarcoidosis, indicates a hypersensitivity state. The Kveim reaction appears to represent a specific reaction of hypersensitivity response to a particular antigen. As many as 75% to 85% of patients with sarcoidosis have a positive test.

Immunologists have called attention to changes in immunoelectrophoretic patterns in sarcoid patients. Thus, Goldstein *et al*²⁰ found significantly elevated levels of IgA among negro patients with sarcoidosis. While Protrowski and Wolanska²¹ also reported elevation of IgA in all phases of sarcoidosis, Turiaf *et al*²² noted increased IgA levels in the initial stages and a total increase of serum globulins, mainly IgG, in the later stages of the disease. Chapman *et al*²³ and Daddi *et al*²⁴ found elevation of IgG but not of other factors in 29 patients with sarcoidosis. At the Fifth International Conference on Sarcoidosis,² D. G. James and colleagues indicated that "there was no significant correlation between serum immunoglobulin concentrations

and clinoradiologic patterns, Kveim-Siltzbach tests, depression of delayed-type hypersensitivity or hypercalcemia.

DIAGNOSIS

According to criteria of the American Thoracic Society,²⁵ diagnosis depends upon a consistent clinical picture with exclusion of other disorders capable of producing a similar pattern and a tissue diagnosis compatible with sarcoidosis. The Kveim test, however, is considered a strong diagnostic feature by others.²⁶ Tissue diagnosis should be obtained, preferably from the affected organ; otherwise, palpable nodes are reliable sources. In the case of pulmonary sarcoidosis, a lung biopsy is diagnostic, while next in order are mediastinoscopy with mediastinal lymph node biopsy and cervical or scalene node biopsy. In systemic involvement, liver biopsy is satisfactory; moreover, biopsy of rectal mucosa, conjunctiva, inguinal lymph nodes or skin may be helpful in establishing the diagnosis. The skin, eyes and hands of sarcoid suspects should be examined carefully for a clue to sarcoid somewhere in the body.

TREATMENT

A majority of the authors agree that most patients with sarcoidosis do not require treatment. Spontaneous recovery is frequently seen. Certain criteria favoring steroid therapy are involvement of a vital organ such as the central nervous system or heart, acute or sub-acute ocular lesions, progressive pulmonary disease, persistent hypercalcemia, acute or sub-acute illness with constitutional symptoms such as weight loss, fever, malaise, liver dysfunction and hypersplenism and progressive disfiguring skin lesions.

Treatment is individualized. In general, the schedule provides 30 mg to 60 mg of prednisone or an equivalent steroid daily for the first month, then reduced to alternate days for three months to one year or more. Discontinuation of steroids is carried out by gradually reducing the dosage and giving ACTH, 20 units intramuscularly, during this time. Careful observation of the patient is important. Recurrence of the disease after completion of steroid therapy is rare, but should be sought. In our institution, we routinely give 300 mg of INH daily to the patients receiving steroids because the tuberculin reaction may merely be suppressed by the sarcoid state, and steroid therapy could release organisms from previously stable tuberculosis foci.

PROGNOSIS

Very little is recorded about the prognosis of sarcoidosis of other organs than the intrathoracic form. Generally, 60% of the cases are improved and 20% unchanged, with 10% becoming gradually worse and 10% of the patients dying during treatment. Drs. Siltzbach and Teirstein reported, "The mortality rate in sarcoidosis is two and one half times that of a comparable general population."²

SUMMARY

Current interest in sarcoidosis is reflected in the more frequent diagnosis of the disorder.

The present case study describes a patient with generalized sarcoidosis, as demonstrated by biopsy of lung, lymph node and rectal mucosa, but with mycobacteria of Battey (Group III) type cultured from the sputum.

A brief résumé of present approaches to the subject of sarcoidosis completes the report.

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(Continued on page 111)

Special X-Ray Exhibit

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Radiologic Problem Case

This is the second in a series of articles presenting unusual radiologic problem cases which the authors believe will be both interesting and educational for the practicing physician. Drs. Rubin, Lambie and Herman are from the Department of Radiology, Menorah Medical Center. They were assisted by P. W. Keitges, pathologist.

A 70-YEAR-OLD WOMAN was admitted to the hospital complaining of pain in the right hip and interphalangeal joints of the hands. The patient had been treated with indomethacin (Indocin) and phenylbutazone (Butazolidin) with no relief of symptoms.

Past History: Mild diabetes.

Physical Examination: The patient was quite pale. There was swelling of soft tissue in the hands and wrists. Pain was elicited by palpation of the right hip and accentuated by straight leg raising.

Laboratory Data: The sedimentation rate was 56 mm/hr. Rouleaux formation was noted. Alkaline phosphatase was normal (85 mu/ml).

The uric acid was 8.7 mg/100 ml. The serum protein electrophoresis demonstrated albumin 3.5 gm/100 cc and a gamma spike of 2.3 gm/100 cc. Total protein was 7.6 gm/100 cc. Blood calcium, phosphorus and BUN were normal. Urinalysis was noncontributory.

Radiologic Findings: Studies of spine, pelvis, skull, hands and chest were obtained. There is a diffuse demineralization of the axial skeleton.

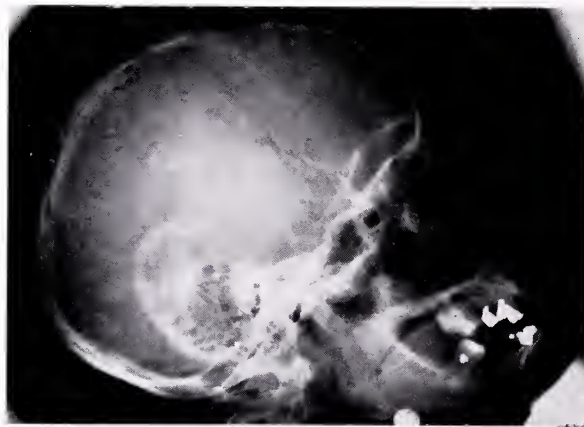


Fig. 2 Several rarefied areas are noted in calvarium. Large defect on superior aspect of skull is destroying outer table.



Fig. 1 A lytic area is noted in right iliac region, lying superior to acetabulum.

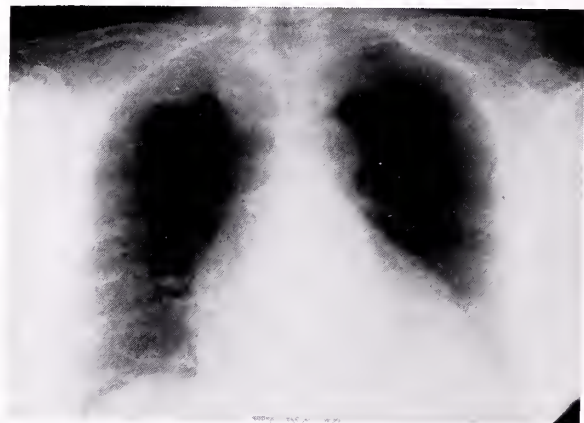


Fig. 3 Soft tissue has extrapleural mass on it. The anterior portion of the first rib is destroyed.

A lytic lesion is present in the body of the right ilium. Several lytic lesions were present in the parietal region of the skull, projecting through the outer table. A soft tissue extrapleural mass, as well as destruction of the anterior first rib on the right, was noted on a lordotic view of the chest. Examination of the hands revealed no evidence of subperiosteal reabsorption (Figs. 1, 2 and 3).

Differential Diagnosis:

1. Hyperparathyroidism
2. Multiple myeloma
3. Metastatic disease

Radiological Diagnosis: Multiple myeloma.

Discussion: Myeloma was favored as the diagnosis due to the presence of lytic lesions of the bone and soft tissue pleural tumefaction. The "classical" lytic punched out lesion, so mythical-

ly characteristic of this disease, is the exception and not the rule. Generalized demineralization is the most common finding and is associated with compression deformities which have been induced by minimal trauma.

Alkaline phosphatase is a clinical aid in the differential diagnosis since metastatic disease and hyperparathyroidism will elevate this enzyme. When the alkaline phosphatase is normal in hyperparathyroidism, the bones are normal.

Surgical Pathological Study: Bone marrow with block. Increase in the number of plasma cells which are markedly atypical being bilobed with vacuolated cytoplasm.

Pathological Diagnosis: Definitive plasmacytosis of bone marrow consistent with malignant dysgammaglobulinemia.

Pulsating Anterior Chest Mass

(Continued from page 105)

tic problems. They can be among the most unpredictable tumors of man. The primary site of origin may remain totally silent, the neoplasm being first suspected when it metastasizes. This also is true to a lesser extent for thyroid carcinomas.

When a pulsatile mass is discovered in the sternal area, the most likely diagnosis is a metastatic lesion of renal or thyroid origin. An eroding aortic aneurysm or other uncommon tumor must be excluded. Appropriate roentgenographic examinations will establish the diagnosis.

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Sarcoidosis

(Continued from page 109)

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Serious Sequelae of Apparently Minor Ocular Trauma

Case Reports

OPTIC NERVE INJURY occurs in relatively few cases of head injury. An incidence of 1.5% was reported in one series.¹ However, optic atrophy and blindness of the involved eye may result where the trauma has been seemingly minor, and external and ophthalmoscopic examination deceptively benign. Reports of two cases of unilateral optic atrophy and blindness of the involved eye following relatively light trauma are presented to emphasize the fact that even patients with minor head injury cases should have an eye examination which definitely includes visual acuity testing.

CASE REPORTS

Case # 1. A seven-year-old boy bumped into the antenna of a parked automobile injuring the region around his left eye. He was seen in the hospital emergency room where visual acuity in the right eye was 20/20 and that in the left eye, "hand motion" at two feet. During the next hour, the left pupil became dilated and fixed to direct light stimulation and vision of the left eye decreased to no light perception. In addition, examination revealed a few scratches around the involved eye but no evidence of serious injury externally. There had been no loss of consciousness. The remainder of the physical examination was unremarkable and x-ray examination of the left orbit and optic canal was negative for fracture; however, there was haziness over the

left maxillary antrum, but laminograms were normal. Three months after injury, vision had remained unchanged, 15 degrees of exotropia was present and optic atrophy had developed.

Case # 2. An eight-year-old boy injured the right side of his face and head in an automobile accident and was seen three weeks later with the complaint of impaired vision in the right eye. There was no light perception on the right, the vision of the left eye was 20/20. Examination revealed a small subconjunctival hemorrhage in the right eye. The right pupil was fixed to direct light but reacted consensually. Funduscopic examination revealed a Grade I optic atrophy in the right eye which progressed to grade IV pallor over the next three months. Esotropia of 5 degrees also appeared. Review of the hospital record revealed there had been a hematoma of the lids on the right side. There had been no loss of consciousness and x-rays of the orbit and optic canal were normal.

DISCUSSION

In both of these cases, the patients were involved in what appeared to be minor head trauma without loss of consciousness, with no demonstrable fractures and with relatively benign external ocular examinations, yet severe optic atrophy with unilateral blindness was the result.

Edmund² studied 22 cases of optic atrophy following head injury. He stated that in 19 of the cases, there was only "light injury," but 17 of the patients had no light perception and the other five had moderate visual reduction. The conclusion of two studies in this field^{1, 2} was that the severity of the injury seemed to have no direct connection with the gravity of the sequelae. Rodger³ even cites a case in which "optic atrophy resulted from a knock on the eyebrow with a potato."

In 174 postmortem examinations of a total of 209 patients who died from skull fracture, only 13 showed a fracture involving the optic foramen and 16 had hemorrhage into the optic

With this report of two cases of unilateral blindness resulting from relative minor periocular trauma, the authors stress the need to check vision in all cases of injury to the head. Doctor Fivian was Chief Resident in Ophthalmology, St. Louis University Hospitals, at the time this paper was written, and Doctor Bowen is Assistant Clinical Professor of Ophthalmology, St. Louis University School of Medicine.

nerve sheath.⁴ Turner¹ and Edmund² found a fracture involving the optic foramen in a total of only nine cases. Jones⁵ and Turner¹ showed that contusions causing optic nerve injury are much more common when the frontal area is involved rather than in the occipital region, that contre-coup from occipital injury never apparently damages the optic nerve and that loss of consciousness is not an invariable accompaniment of optic nerve injury.

The pathogenesis of the optic atrophy in these cases is not clear. Direct injury to the optic nerve by compression, cutting or tearing of fibers is probably rare. Pringle⁴ advanced the explanation that the lesion was caused by compression due to hemorrhage into the vaginal sheath of the nerve. Cases with such hematomas have been reported, but this must be an unusual cause since ophthalmoscopic evidence of this is almost always absent and sharp field defects can be found in some cases. Massin⁶ studied 63 cases of cranio-orbital blunt trauma and concluded that the optic nerve lesions are vascular, probably angiospastic in nature. Edmund² points out that the firm attachment of the dural sheath to the optic nerve in the upper part of the optic canal, where the subarachnoid space is virtually absent near the apex of the orbit, makes this region particularly susceptible to vascular damage because of its immobility. He also believes that anatomical studies of the retinal circulation point to a lesion of the nutrient vessels in the area around the optic nerve. Clinical findings supporting this include rare occurrences of canal fracture, frequently slight preceding injury; poor visual prognosis; lack of change in field defects; initial normal ophthalmoscopy; and the poor results from surgical decompression. His conclusion is that the lesion is undoubtedly vascular, but that the exact mechanism is yet to be determined. Walsh⁷ has suggested that contusion necrosis, i.e., a primary lesion of the nerve itself, could be the cause for the visual loss. Because of the lack of pathology specimens in these cases, the etiology must still be considered an open question.

Examination of these patients immediately after the injury characteristically reveals vision to be decreased. Pupils are generally equal (unless there is a coincidental third nerve lesion or traumatic mydriasis), but the pupil on the injured side reacts sluggishly or not at all to light

and briskly to consensual light.¹ Ophthalmoscopy usually is within normal limits; vessels and discs are not noted to be abnormal.^{1, 2} Pallor of the disc can be noted at three weeks and progresses rapidly.¹

Differential diagnosis of visual loss after trauma includes previous unnoticed refractive error, hysterical amblyopia, choroidal tears and macular hemorrhage and edema. Pupillary reactions are important in helping to eliminate the above conditions from consideration.

Treatment generally is conservative medical management, although exploration and decompression of the optic nerve may be considered. In Edmund's series,² six patients underwent such surgery but only one experienced visual acuity improvement. Sixteen were not explored and of these, four improved and 12 had unchanged vision. In most instances, exploration of the optic nerve in the absence of specific indications, e.g., x-ray evidence of optic canal fracture, is not warranted and probably will not improve the visual outcome. If vision is to improve, it usually starts about the third to fourth day and progresses rapidly; maximum improvement in vision is usually attained by the fourth week.¹

SUMMARY

Two cases of seemingly minor ocular trauma resulting in optic atrophy and blindness are reported. A brief review and discussion of other similar cases is undertaken. The cause of this condition is thought to be either vascular or traumatic optic nerve necrosis with no satisfactory treatment available. The prognosis is frequently poor. The importance of evaluating visual acuity early in head injuries is stressed.

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The Technique of Hemorrhoidectomy

Although the average hemorrhoidectomy can and should be a relatively simple procedure, the author emphasizes that removing the pathologic tissue and obtaining a good functional result far exceed in importance the resulting cosmetic effect. Doctor Burns is an Associate Professor of Clinical Surgery at the St. Louis University School of Medicine.

ONE OF THE MOST COMMON OPERATIONS performed is that of hemorrhoidectomy. Because so many "simple hemorrhoidectomies" are done haphazardly or with little thought given to the final result, it is not surprising to find complications postoperatively. These may take the form of residual hemorrhoidal tissue, stenosis, fissure, abscess or fistula. However, none may seem of major importance except to the person who has them.

There are only two main objectives to be achieved, namely, removal of pathological tissue and obtaining a good functional result. Both can be readily accomplished by the so-called "Open Method" as described by Milligan¹ in 1937. In the great majority of cases, this type of operation will suffice. The author has used a modification of this method (Fig. 1) in several thousand anorectal operations during the past

20 years, finds it satisfactory and associated with a minimal number of complications.

Modifications of this technique must be employed frequently to suit a particular need or to treat a condition out of the ordinary.²

This is not a plea for any one type of operation, because there are many different ways to remove hemorrhoids, but it is the type of operation with which the author is best acquainted and employs most frequently.

In 1882, Walter Whithead described his method of hemorrhoidectomy and, in later years, his method became quite popular. His operation, though, removed the internal hemorrhoidal plexus and left the anal canal and perianal tissues intact. His circumferential incision was made at the anorectal line. Others have modified this method to the extent that the entire anoderm is removed and the rectal mucosa is then attached to the perianal skin (Fig. 2).

This marked alteration of the normal architecture of the anal canal presents a nice cosmetic effect initially, but it usually results in further complications.

In the "Open" or "Ligature and Dissection" techniques or in other methods similar to these, strips of skin, anoderm and mucosa provide a new lining during the healing phase. However, when the rectal mucosa lines the anal canal,

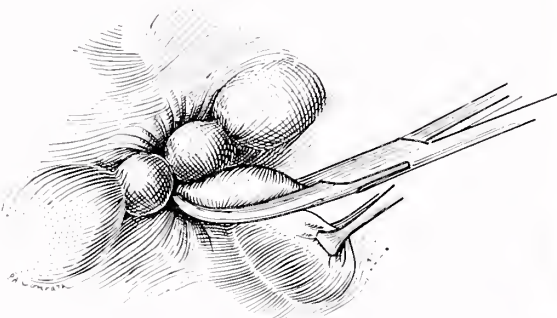
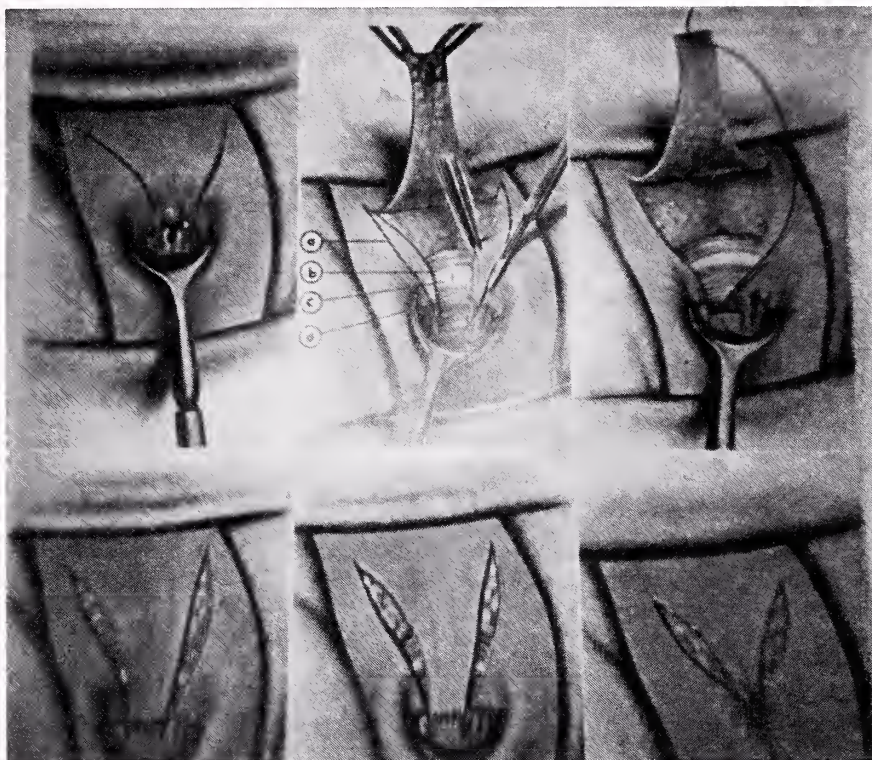


Fig. 1 Dissection and ligation method.



Fig. 2 Ectropion of rectal mucosa.

Figure. 3 Revision with anoplasty.



there may be bleeding, ectropion, stenosis or a "wet perineum" because of mucus. Some interference with continence also may result.

It is generally necessary to correct this so-called "Whitehead Defect or Deformity" by some form of anoplasty. The anoplasty must reline the anal canal with skin. Again, there are several ways to do this. One of the most satisfactory methods, which I have used successfully many times³ (Fig. 3), was designed by Dr. George Becker of Paterson, N. J.

This type of anoplasty may be carried out in one or two stages.

SUMMARY

The average hemorrhoidectomy can, and

should be, a relatively simple procedure. There are, of course, many different techniques. All are good, provided that they remove the pathological tissue and give the patient a good functional result. If the anoderm has been removed, a method of correction is briefly described.

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The Annual Meeting of the Missouri Chapter of the American College of Surgeons is scheduled for May 7, 8, 9 at Tan-Tar-A, Osage Beach. The professional program will be open to all members of the medical profession. Members of the Chapter who plan to attend are requested to make their reservations now.

Geographical Considerations in Community Mental Health

A Study

WITH THE PRESENT EMPHASIS on mental health centers and the problems of fulfilling the regulations of the Mental Health Center Act of 1963, geographical considerations pose a significant challenge in the planning and spacing of such centers throughout a given community.¹⁻⁵ Factors that have been found to influence the function of such comprehensive centers include the composition of the population served and its density, the quality and availability of means of transportation and the involvement of the community in the welfare of the patient.⁶⁻⁸

In 1968, there were 258 community mental health centers in the United States.⁹ The experience gained in many of them surely can be of help to centers still in a planning stage. With the recent extension of this program by the federal government, this study becomes all the more relevant. This paper deals with geographic and diagnostic influences on patients consulting one

of these centers.

The Mid-Missouri Mental Health Center in Columbia, Mo. was established in 1966. Its first inpatient was admitted in February, 1967.

This modern center draws its patients from the middle one third of the state of Missouri (Fig. 1). The area of this part of the state is roughly 32,500 square miles and the population is approximately 844,300. The center provides inpatient and outpatient care, partial hospitalization, alcoholic treatment and child care among other essential services. The inpatient capacity of the center is 116 beds. In the outpatient department, walk-in patients, as well as those with regular appointments, are seen. In addition, the center sends out three traveling clinics once a week into the community in different parts of the catchment area, with distances ranging from 30 to 70 miles from the "mother" hospital. Staffed by a psychiatrist, a social worker and a rehabilitation

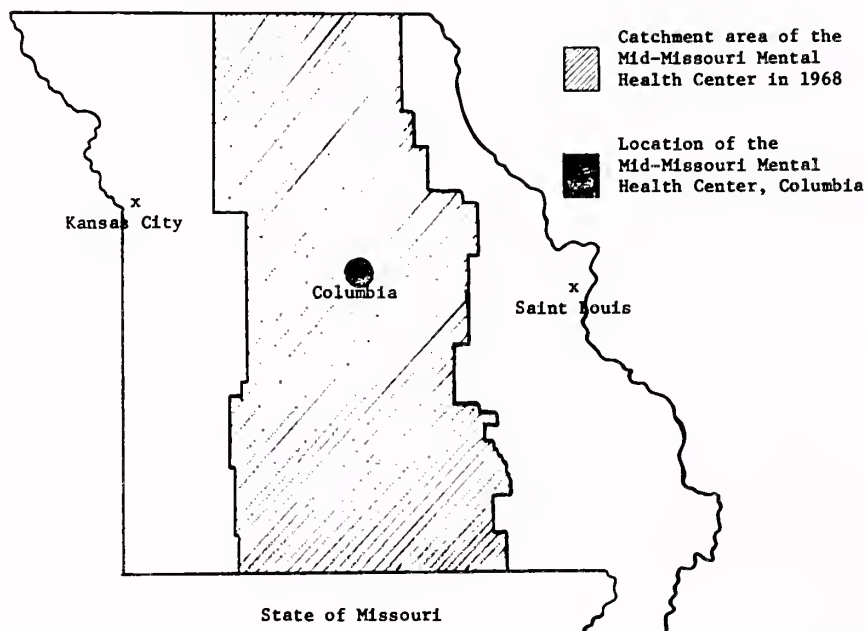


Fig. 1 Map of Missouri with catchment areas of the Mid-Missouri Mental Health Center.

counselor, these clinics provide outpatient care, counseling and educational services.

Since the opening of the center, patients living in the nearer parts of the catchment area have been more highly represented among the patient population, as expected. On the basis of this observation, our study was initiated to explore this aspect in more detail and to determine the relationships between the kind and seriousness of illness as judged by the diagnosis and the distance patients or their families are willing to travel for help. Another aim of the survey was to determine whether or not distance from the center affected the kind and duration of care a patient received.

METHOD

The study was conducted on all adult, first admissions to the Mid-Missouri Mental Health Center and its three traveling clinics between July 1 and Dec. 31, 1967. The period of six months from the date of the first admission was studied since it was considered adequate to cover maximum lengths of hospitalization and reasonable outpatient care. Within this period, the number of times outpatients traveled to the clinics for treatment and the duration of hospitalization of inpatients were recorded. In addition, information, such as age, sex, civil status and employment, all contributing factors in the identification of the patient, the distances traveled for help and the diagnostic category of the patients was compiled. The diagnoses of the patients' illnesses were divided for convenience into eight broad categories, i.e. schizophrenia, affective disorders, neurotic disorders, addiction and alcoholism, personality disorders, organic brain syndromes, others and, finally, a category for those cases undiagnosed or with questionable diagnoses.

The distance from the patient's residence to the clinic in which he was first seen and to the clinic nearest him was noted in an effort to find out if patients had any preference for particular clinics.

RESULTS

In the period between July 1 to Dec. 31, 1967, 451 patients were admitted to this center. Of those admitted, 233 (51.7%) were accepted as outpatients and the remaining 218 (48.3%) were admitted as inpatients. As shown in Table 1, 164 patients (36.4%) came from a distance less than 20 miles, 107 patients (23.7%) from a dis-

TABLE 1
TOTAL NUMBER OF ADMISSIONS DISTRIBUTED
ACCORDING TO SEX

Distance in Miles From Facility	Male					Female				
	SINGLE	MARRIED	DIVORCED	WIDOW	TOTAL	SINGLE	MARRIED	DIVORCED	WIDOW	TOTAL
0-20 . . .	22	38	18	02	80	23	43	14	04	84
21-40 . . .	15	28	11	02	56	07	38	04	02	51
41-60 . . .	06	05	01	01	13	04	09	05	02	20
61-80 . . .	05	18	03	02	28	04	26	04	05	39
Over 80 . .	12	13	07	01	33	16	24	06	01	47

tance of 21 to 40 miles, 33 patients (7.3%) from 41 to 60 miles, 67 patients (14.9%) from 61 to 80 miles and 80 patients (17.7%) traveled more than 80 miles.

In an attempt to evaluate the significance of these data (Table 2), we compared the proportion of patients who came from various distances to the general population of the areas within these distances. The results show that 60.1% of the patients who came for help lived within an area with a radius of not more than 40 miles from the facility they consulted. The population of this 40-mile radius area in relation to the whole catchment area, however, is only about 23.4% of the total population. In other words, although the area nearer the center contributed less than one fourth of the population of the whole catchment area, it provided almost two thirds of the patients using the center. From the area with a radius of less than 60 miles, 67.4% of the patients came. The popula-

This study was initiated to explore the geographic and diagnostic influences on patients consulting a community mental health center, to determine the relationships between the type and seriousness of illness and the distance patients and their families are willing to travel and to determine if the distance from the center affects the kind and duration of care a patient receives. Drs. Salih and Bazzoui are Clinical Directors, Mid-Missouri Mental Health Center, and Assistant Professors, Department of Psychiatry, University of Missouri School of Medicine.

TABLE 2
DISTRIBUTION OF PATIENTS ACCORDING TO RACE, AGE AND EMPLOYMENT

<i>Distance in Miles From Facility</i>	<i>Race</i>			<i>Age</i>							<i>Employment</i>									
	WHITE	BLACK	TOTAL	16-25	26-35	36-45	46-55	56-65	OVER 65	TOTAL	UNEMPLOYED	HOUSEWIFE	LABORER	SEMI-SKILLED AND FARMERS	SKILLED	PROFESSIONAL	STUDENT	RETIRED	TOTAL	
0-20	153	11	164	53	36	30	26	12	07	164	24	29	15	22	34	07	29	04	164	
21-40	102	05	107	22	26	16	23	12	08	107	13	27	06	11	30	05	08	07	107	
41-60	33	00	33	09	06	07	07	03	01	33	09	09	04	04	02	01	04	00	33	
61-80	64	03	67	13	16	16	11	08	03	67	11	26	04	07	12	02	03	02	67	
Over 80	78	02	80	32	17	15	07	07	02	80	16	24	05	14	08	01	11	01	80	

tion of this area, however, comprises only 31.7% of the population of the total catchment area. In comparison, the area more than 60 miles away was the source for 32.6% of the patients, but it contributed 68.3% of the total catchment population. One surprising finding was that the area between 41 to 60 miles contributed relatively the smallest proportion of patients—even less than areas farther away. This fact was clarified later after studying the population density of the area.

It can be seen from figures relating to modes of admission (Table 3) that as the distances from the center increased, more patients were given inpatient care than outpatient treatment. For example, of 164 patients who came to the center from a distance of less than 20 miles, more than one half (56%) were treated as outpatients whereas of 80 patients who came from more than 80 miles, only about one third (37%) were treated as outpatients. There is a distinct, gradual increase in proportion of inpatients as the distance from the center becomes longer. A turning point seems to be reached around the distance of 60 miles farther than that from which a larger proportion of patients are hospitalized (Fig. 2).

Another interesting, but not unexpected, finding is that 30.6% of the patients traveling less

than 20 miles received more than four treatment sessions, whereas only 20% and 3.3% of those traveling between 20 to 80 miles and more than 80 miles, respectively, received more than four treatments. This indicates that the farther

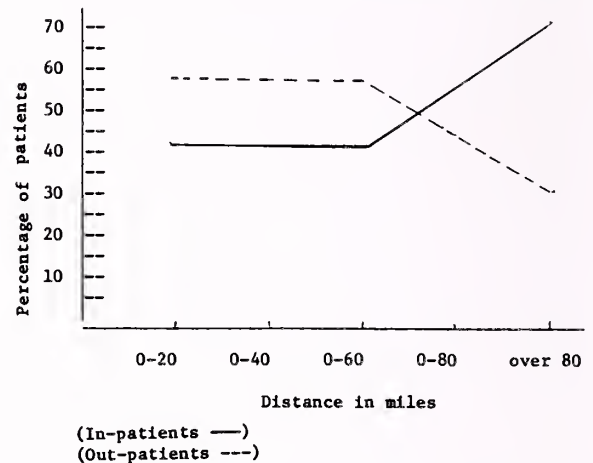


Fig. 2 Relationship between the type of care and the distances traveled by patients.

away the patient lives, the shorter will be his outpatient treatment.

On the other hand, the opposite occurs in relation to inpatients. Of the patients traveling up to 20 miles, 43.7% stayed as inpatients for

TABLE 3
DURATION OF CARE

Distance in Miles From Facility	Number of Out-Patient Visits						Duration of In-Patient Stay (Weeks)						
	1	2-4	5-7	8-10	10+	TOTAL	1	1-2	2-4	4-6	6-10	10+	TOTAL
0-20	31	34	13	10	05	93	13	07	20	09	16	06	71
21-40	22	26	03	03	07	61	05	06	13	09	05	08	46
41-60	10	04	02	01	02	19	01	00	08	02	02	01	14
61-80	08	16	04	02	00	30	03	03	14	09	07	01	37
Over 80	11	18	01	00	00	30	01	00	19	12	08	10	50

TABLE 4
DISTRIBUTION OF PATIENTS ACCORDING TO DIAGNOSIS

<i>Distance in Miles</i>	<i>Psycho-neurosis</i>	<i>Schizo-phrenia</i>	<i>Affective Disorders</i>	<i>Organic Syndromes</i>	<i>Addiction</i>	<i>Personality Disorder</i>	<i>Other</i>	<i>No Diagnosis</i>	<i>Total</i>
0-20	34	20	07	11	36	26	13	17	164
21-40	21	20	08	08	22	09	13	06	107
41-60	09	03	04	04	06	06	01	00	33
61-80	13	13	05	09	13	05	06	03	67
Over 80	16	18	06	06	08	20	05	01	80

more than four weeks compared to 60% of the patients who traveled more than 80 miles. Patients coming from long distances as a group stay longer than those living nearer the center. The various factors influencing this will be discussed later.

A relevant observation which may have influenced the average duration of hospitalization among patients who traveled less than 20 miles is that about 18.3% of them discharged themselves within one week from admission compared to only 4.6% of those who traveled more than 60 miles. Most of the patients who discharged themselves early in treatment were alcoholics.

In studying the data on diagnosis (Table 4), the variation in the proportion of the very sick people (according to our diagnostic categories) between areas lying near and far from the center does not seem to be striking. On closer scrutiny (Table 5), however, it is evident that four categories of diagnoses vary significantly with distance. Addicts, mostly alcoholics, comprised the only diagnostic group that increased in its proportion to the total number of patients as the distance became nearer to the hospital.

Those coming from less than 20 miles formed twice as large a proportion as those coming from more than 80 miles in relation to the total number of patients coming from that area.

On the other hand, the proportion of patients with schizophrenia, affective disorders and, to a lesser degree, personality disorders (consisting mainly of passive-aggressive and compulsive personalities) was generally twice as great among patients coming from more than 80 miles than those from less than 20 miles. The proportion of psychoneurotics and patients with organic brain syndromes was roughly the same among the nearer patients as among the farther ones.

The percentages of these diagnostic categories for distances more and less than 60 miles and, also, more and less than 80 miles (Table 5) were compared to determine if there is a turning point beyond which the composition of patients definitely changes. This showed that an appreciable difference can be seen only between patients traveling less and more than 60 to 80 miles.

DISCUSSION

Our findings seem to be in agreement with most of the work that was done on this subject

TABLE 5
PERCENTILE DISTRIBUTION OF PATIENTS ACCORDING TO DIAGNOSIS

<i>Distance in Miles</i>	<i>Psycho-neurosis</i>	<i>Schizo-phrenia</i>	<i>Affective Disorders</i>	<i>Organic Syndromes</i>	<i>Addiction</i>	<i>Personality Disorder</i>	<i>Other</i>	<i>No Diagnosis</i>	<i>Total</i>
0-20	20.7%	12.2%	4.3%	6.7%	21.9%	15.9%	7.9%	10.4%	100%
21-40	19.6%	18.7%	7.5%	7.5%	20.6%	8.4%	12.1%	5.6%	100%
41-60	27.3%	9.1%	12.1%	12.1%	18.2%	18.2%	3.0%	0.0%	100%
61-80	19.4%	19.4%	7.5%	13.4%	19.4%	7.5%	8.9%	4.5%	100%
Over 80	20.0%	22.4%	7.5%	7.5%	10.0%	25.0%	6.3%	1.3%	100%

in the past. The data seem to show that more patients coming from the nearer areas are treated as outpatients and more patients from distant areas are admitted as inpatients. This, of course, can be interpreted in a number of ways. The fact that more seriously ill patients (affective disorders and schizophrenics) came from distant areas may be partially responsible for this observation. On the other hand, it is conceivable that distance may have an effect on the admitting physician's attitude toward management as it has in the consideration of length of confinement and follow-up plans.¹⁰

Patients coming from nearer areas form a larger proportion of the total patient population than those coming from distant areas. The only exception to this generalization is the area between 40 to 60 miles away in which there was a sudden drop in the number. On studying the map, however, we found few communities in this range that contributed patients; the rest of the area is rarified as far as population is concerned. This increased use of the facility by patients nearer to it may not only be a reflection of the distance and concentration of population in Columbia but, possibly, the higher rate of mental illness in this socially mobile university town.

Hodges and Dorken,² in 1961, found that 80.4% of their outpatients who came to the center in Fergus Falls, Minn., lived within 60 miles of the center. In our study, 45.2% of all our patients (inpatients and outpatients) came from the same area. For outpatients only, our figure is 71%. Since their study years ago, increased willingness to travel and better roads may have increased the number of patients who are willing to travel farther than 60 miles for help. Another explanation, of course, may be the difference in demographic composition of our two populations.

Although it is not clear what criteria Hodges and Dorken, 1961, used for assessment of severity of mental illness, they found that patients coming from farther areas are more likely to display more serious mental problems. This is confirmed by our study. Our data seem to indicate that the farther a patient is from the mental health facility, the more reluctant he is to commute for help unless he is seriously ill. Above a distance of 60 to 80 miles in our study, mostly seriously ill patients came for help. In the study referred to above,² Hodges and Dorken thought that 40 to 60 miles or an hour's drive was a practical limit beyond which not many pa-

tients are willing to travel. Since their study, of course, 60 to 80 miles has become more like an hour's drive than 40 to 60 miles. The relationship between diagnosis and distance was found to be very interesting.

Psychoneurotic patients do not seem to mind the distances to be traveled, and their proportion to the total number of patients remains the same over the range of distances. Alcoholics, on the other hand, are more reluctant to travel long distances for help. Patients traveling 80 or more miles show twice as large a proportion of schizophrenia, affective disorders and severe personality disorders than those traveling less than 20 miles. This proportion probably is even higher if we consider that Columbia (population of about 55,000), from where most of the under-20-mile patients come, should claim relatively more schizophrenics and patients with personality disorders than smaller towns in the catchment area. The fact that more sick people come from farther distances may explain the longer inpatient stay of such patients; however, the number of patients leaving against medical advice is much higher among those who come from nearer areas. This may influence the average duration of stay.

More married patients seemed to travel longer distances for help than single patients. This may be significant in view of the known fact that suicide is more prevalent among single people, especially in middle-aged men. Being married not only provides a sort of protection against suicide by human involvement but, at the same time, it provides the patient with a person to motivate him to seek and obtain help.

The findings in this study will be of no practical value unless they are viewed with the present extreme shortage in mental health centers and personnel in mind. The results will then be of assistance in the planning of such centers in terms of distance and services offered.

To have the least number of centers situated at optimal distances from each other would be the ideal solution to the problem. The density of the population that is served may be an important factor in deciding the size of the facility, the location and, perhaps, the number of clustered facilities, for example, in a larger city. The number of centers in rural and semirural areas, however, appears to be determined more by distance than density; even in areas in which the population is scarce, centers more than 150 miles apart will be ineffective since they will be unreachable.

Our data show clearly that the alcoholic is in the only category of patients who are not motivated enough to travel long distances in search of "cure." Geographically, therefore, the alcoholic will pose a problem that may necessitate involving the local community agencies more intensely in the motivation and even transportation of these patients.

In conclusion, it must be mentioned that this study was undertaken a few years after publication of a similar study. More data were reviewed and studied. The results, however, may be applicable only to areas of the country that have a similar geography and density of population. Whether it is of a more general application can be determined only from similar analyses in different settings.

SUMMARY

Four hundred and fifty-one first patient admissions to a mental health center were reviewed. This population was divided almost equally into inpatients and outpatients. It was found that the longer the distance a patient travels, the more likely he is to be admitted as an inpatient. It also was found that mainly the seriously sick patients were willing to travel be-

yond 60 to 80 miles for help, whereas alcoholics did not appear to be willing to travel very far for treatment. Further investigation in different geographical settings is needed to generalize these conclusions.

Acknowledgement: The authors wish to express appreciation to Miss Ann Moore, research assistant, for her help in collecting and analyzing data for this article.

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Mid-Missouri Health Center
803 Stadium Rd.
Columbia, Mo. 65201

Missouri Internists Schedule Scientific Meeting

The American College of Physicians (ACP) will hold a scientific meeting for specialists in internal medicine in Missouri on February 26-27 in Columbia.

The meeting is one of 37 state/area meetings being sponsored by the College during the 1970-1971 academic year. Held throughout the United States and Canada, the meetings help the College's 16,000 members keep informed of new developments in the basic sciences and in clinical medicine. The College has been holding these scientific-educational meetings annually since 1930.

The Missouri meeting is being planned under the general direction of Maxwell C. Berry, M.D., Kansas City, ACP Governor for Missouri and Clinical Professor of Medicine at the University of Kansas School of Medicine.

President's Message

All predictions suggest that the 1971 session of the Missouri General Assembly will be one of the busiest on record. The first two days' activity of the session certainly pointed to the fact that these prognostications will come true.

Members of the MSMA Staff in Jefferson City tell me that 33 bills and two resolutions were introduced the first two days in the Senate, while the House received a whopping 201 bills and 13 joint resolutions in one day.

As you can well imagine, there are a number of these bills in which we have interest—more than 35 out of the first 250.

You will be hearing more about the Legislative session in subsequent editions of *MISSOURI MEDICINE* and in correspondence from the Association.

Right now, I would like to call particular attention to one bill which was introduced on the first day of the session in the Missouri Senate by Senators Albert Spradling, Jr. of Cape Girardeau and Lem Jones of Kansas City.

The measure, Senate Bill 7, provides that any person or organization involved in the collection, processing, distribution or administration of blood or other bodily tissues or substances or biological substances for medical use shall be liable for any injury suffered by a patient *only if the injury was proximately caused by the negligence* of such person or organization.

It is similar to bills introduced during the last several sessions of the General Assembly. Two years ago, the similar measure was passed by the House but died in Senate Committee.

There is a real sense of urgency for passage of the bill this year—an urgency which was lacking in the past. Courts in Illinois and Pennsylvania in the past year have held that liability may arise even though it is not possible, scientifically or medically, to assure freedom from contamination of blood.

Blood transfusions and the use of other bodily tissues or substances or biological substances in rendering medical care to patients are often essential to save the life of a patient or to protect his health. Protecting the welfare of patients requires that blood for transfusions and bodily tissues or substances and biological substances be available and that use when needed be encouraged and not burdened with unreasonable restrictions and increased costs.

When liability for damages in the absence of negligence is imposed following injury resulting from the administration of blood transfusions, bodily tissues or substances or biological substances, the cost of medical care is increased and, inevitably, the availability of medical care is adversely affected.

The public interest requires the enactment of appropriate state legislation which will provide that there only be liability when injury was caused by **negligence**.

Passage of Senate Bill 7 **this year is imperative**. I would urge every member of the Missouri State Medical Association to contact his State Senator and later his State Representative to urge passage!



Joseph L. Fisher, M.D.

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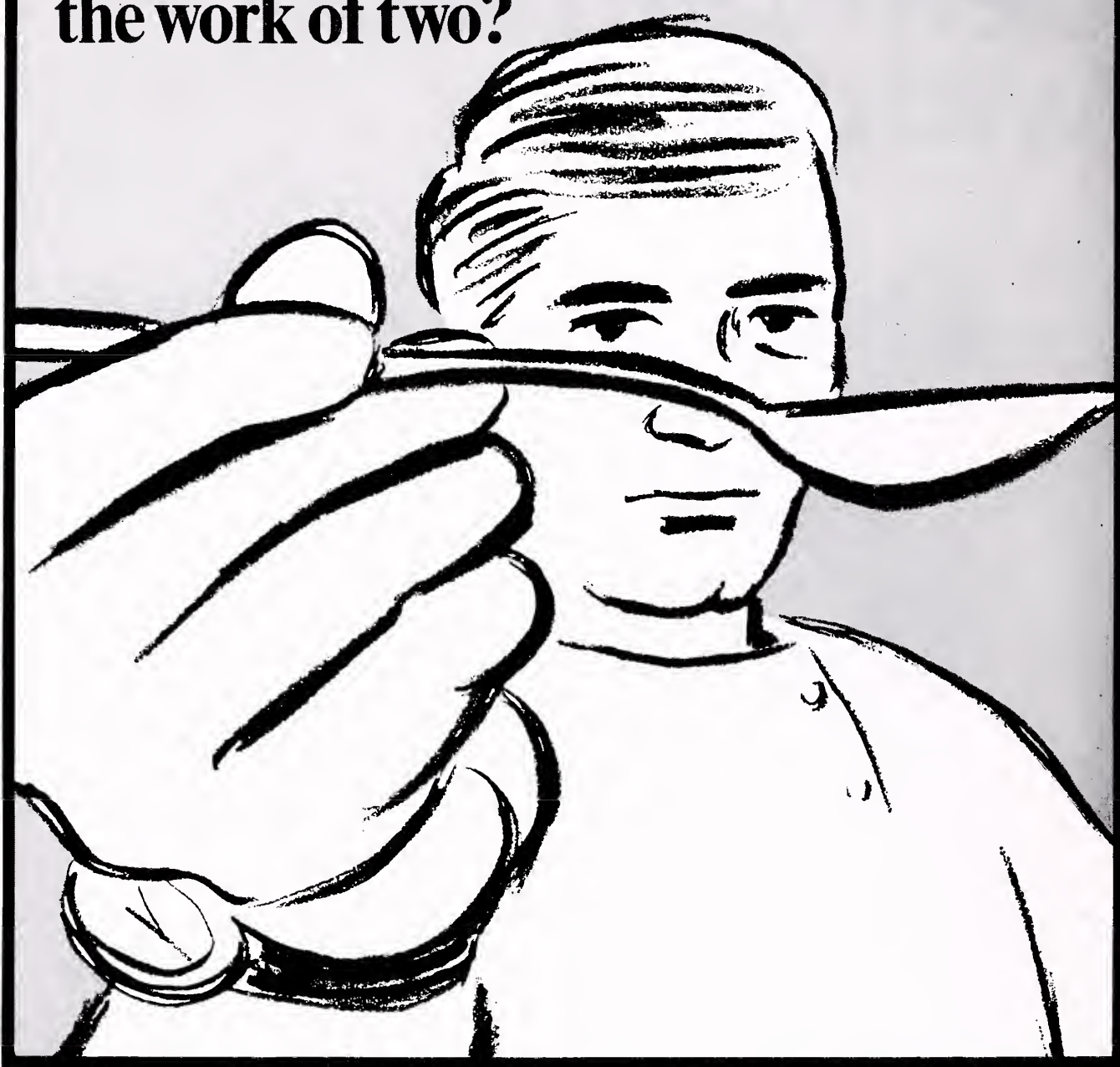
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Woman's Auxiliary



"... When Ideas are part of social action, they are something to be thought about, accepted or rejected, or even fought over; they remain, however, a part of conscious activity. This kind of idea demands a conscious change in the way one lives, something that is hard for all. . . . It is becoming clear that in the world our present philosophy has fostered, nature cannot take care of herself; we now know her largesse is finite."

Dr. Eric J. Cassell, "Nineteenth and Twentieth Century Environmental Movements," *Archives of Environmental Health*, Vol. 22, Jan. '71, 39-40.

The problems of our environment are topics being discussed by many people and groups, including the Missouri State Medical Association and its Auxiliary. As a result of resolutions passed by both organizations at last year's conventions, however, we are doing *more* than just talking.

The Auxiliary Environmental Health Committee, which is headed by Mrs. Marshall T. Metzgar of Columbia, who is working closely with Dr. Arthur Neilson, the MSMA Council, the University of Missouri Environmental Surveillance Center and Extension Division, has already done an outstanding job educating our membership about the environmental problems facing Missouri.

The committee has completed a survey of the buying and living habits of our members and has conducted a survey of the efforts being made to solve environmental problems in Missouri communities. The results of these surveys will be tabulated at the Surveillance Center and the information will be used to develop package programs for Missouri. Each program will be individually tailored to the needs of each county. It will be directed to the physician's wife to enable her to act as an individual, as part of a group (county auxiliary) or as a catalyst within her community. These package programs will be distributed at our convention in April.



Mrs. William M. Walker
President

Each program will contain the following:

1. A resource list (publications, books, etc.) of interest to all.
2. A list of visual aids (films, speakers and a suggested program).
3. Special material for each county as determined by the responses to the questionnaires.
4. A list of positive suggestions or actions or both that can be followed.

Thank you for asking us to join with you in working on this project and giving us your support. We will need you even more as we begin our work at the local level.

EDITORIAL

A COMMENT

It is proper that the article published in the January, 1971 issue of this journal, "New Preventive Treatment for Skin Cancer" by Drs. Larry E. Millikan and Philip C. Anderson, should be presented to the profession. This article represents progressive thought in the problem of delivery of health care, a problem with which, in all its facets, we must daily learn to wrestle.

Dr. Joseph Finnegan, Editor of MISSOURI MEDICINE, has requested me to editorialize on this article. He knew, I am sure, that my waking hours were much occupied with the problem of skin cancer and precancer and, also, that I was a member of the Dermatology Department of the Missouri Medical Center, along with Drs. Millikan and Anderson. Therefore, I should represent an ideal bridge between their opinions and the physician expected to put those opinions into practice.

Academically, to begin, Drs. Millikan and Anderson contradict themselves. They title their paper as "preventive" treatment for skin cancer. Yet, in their synopsis, they state that the actinic keratosis is already skin cancer. Perhaps this is a small point but, in the body of their article, they leave the impression that the cells of this keratosis, already a cancer, are "reproducing almost as rapidly as bacteria." To this, I cannot agree. I am sure they also know that the evolution of the actinic keratosis can be exceedingly variable. I have watched specific keratoses for ten years and have seen no change in them. However, in others, I have noted rapid development into malignancies in a period of a few months. Therefore, I am not willing to concede that an actinic keratosis should already be termed "cancer" and be assigned a prescribed course. Instead, I consider it to be a precancerous dermatosis, and it is in this connotation that I daily derive the greatest satisfaction from the treatment of these lesions, for I think this to be one of the few situations in which a physician can truly prevent cancer rather than attempt to cure it.

My only other criticism is that I consider Dr. Millikan's and Anderson's telephone proposal as

being heavily weighted with idealism. There are simply too many skin lesions which can be confused with actinic keratoses. I can envision tons of 5-fluorouracil being wasted, and 5-fluorouracil is not a chemical to be used willy-nilly. In this regard, I am reminded of a remark of my friend, Dr. James Good, an excellent histopathologist in Ft. Scott, Kan., who said that the most frequent excisional specimen of "skin cancer" sent through his laboratory was the seborrheic keratosis, an evil-looking but benign and easily recognizable lesion. I certainly do not mean this critically of my statewide medical brethren. They know a great deal of which I have only the haziest appreciation. But, in this diversity of skin lesions, they will inevitably treat a great many lesions which they have simply not been trained to distinguish. We can't know everything. Therefore, I hardly see how sensible advice can be given over the telephone.

Last, I should state my opinion that, even with proper diagnosis, not all patients with actinic keratoses are suitable candidates for 5-fluorouracil treatment. Most of such patients have only a few lesions and these can be much more promptly and satisfactorily treated with liquid nitrogen or with some other method. It is less than 5% of our actinic keratosis patients whom my partners and myself consider to have severe and widespread involvement enough to warrant treatment with 5-fluorouracil. Such treatment is prolonged, uncomfortable and not free of complications.

I certainly do not wish to bemean 5-fluorouracil treatment of actinic keratoses. It has its place and it has become a generally accepted method. I believe that the article of Drs. Millikan and Anderson will publicize this treatment, and it is in this publicity that their greatest good will have been achieved. Until extremely accurate diagnosis of these skin lesions becomes possible throughout our ranks, however, I question that any such telephone arrangement as they propose should be encouraged.

WILFRED E. WOOLDRIDGE, M.D.
Springfield

Have you read the Preliminary Program on Pages 96-97?

113th MSMA ANNUAL SESSION

April 15-18

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Continuing Education Coming Events

- | | |
|-------------|--|
| Feb. 3 | Office Pediatrics
Continuing Education, M.U. School of Medicine
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| Feb. 8-9 | Cardiac Auscultation
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Feb. 18-19 | Hearing and Speech
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Feb. 22-24 | Surgery
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Feb. 26-27 | The American College of Physicians Missouri Meeting
and Missouri Society of Internal Medicine
Missouri University Medical Center
Columbia 65201 |
| March 8-10 | Pediatrics
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| March 10-11 | Drug Therapy
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| March 26-27 | 23rd Annual Midwest Cancer Conference
Broadview Hotel, Wichita, Kan.
AAGP Credit |

In Memoriam

Walsh, Thomas J., M.D., St. Louis, a graduate of Washington University, 1949; member of St. Louis Medical Society; age, 45; died Sept. 6, 1970.

Brooks, John M., M.D., Springfield, a graduate of Washington University, 1895; member of Dallas-Hickory-Polk-Dade County Medical Society; age, 101; died Nov. 6, 1970.

Doggett, Sylvester, M.D., Sikeston, a graduate of National University, 1912; member of West Central Missouri Medical Society; age, 81; died Nov. 19, 1970.

Hofstatter, Lilli, M.D., St. Louis, a graduate of the University of Vienna, 1949; member of St. Louis Medical Society; age, 63; died Dec. 4, 1970.

Nunn, Pat Morris, M.D., Greenwich, Conn., a graduate of the University of Texas, 1921; member Jackson County Medical Society; age, 74; died Dec. 6, 1970.

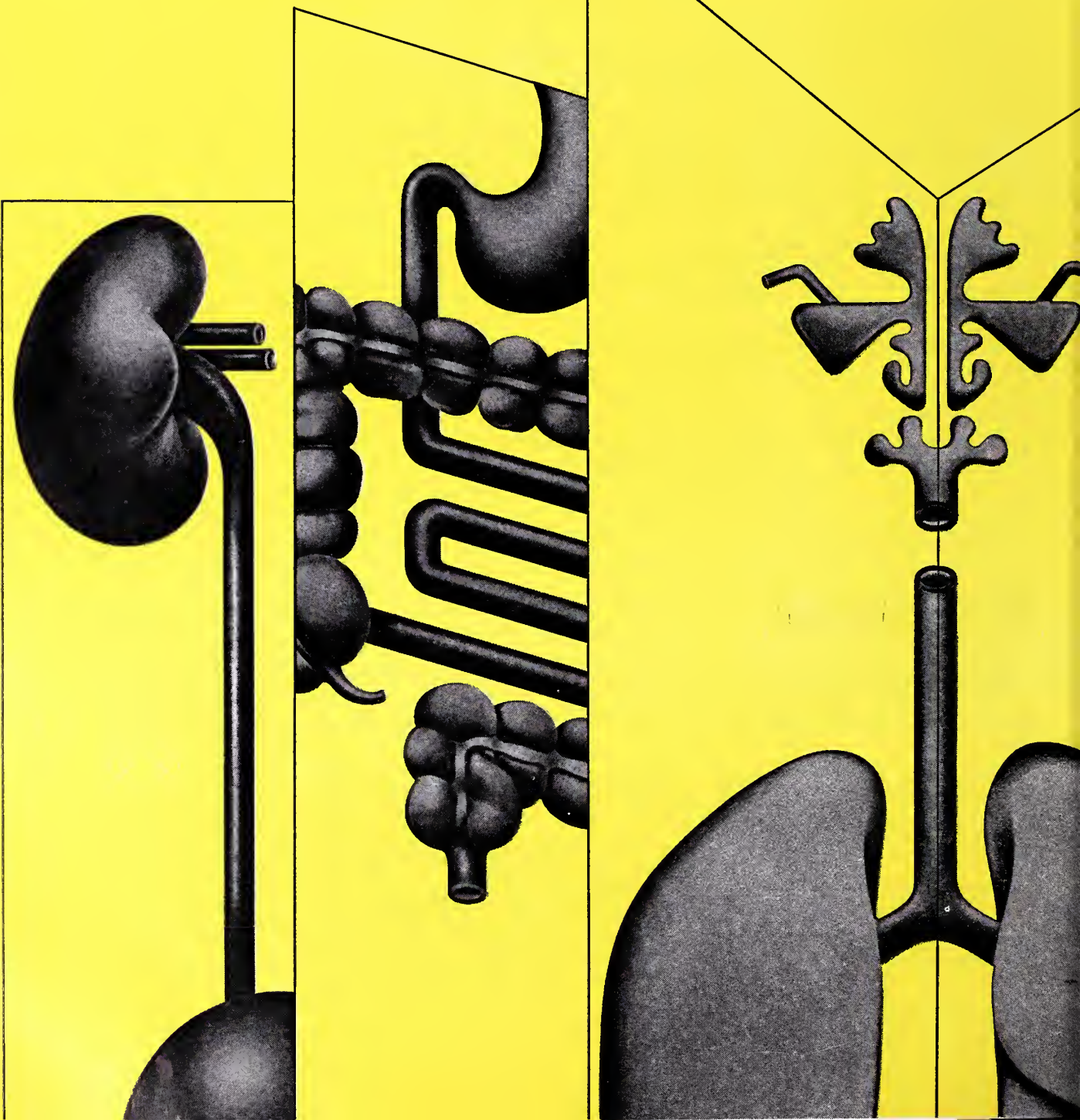
McCann, John F., M.D., St. Louis, a graduate of St. Louis University, 1950; member St. Louis Medical Society; age, 53; died Dec. 26, 1970.

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Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. In staphylococcal infections, indicated surgical procedures should be performed.

Contraindications: Hypersensitivity to tetracyclines.

Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used and serum estimations may be necessary during prolonged therapy. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).

Precautions: Mycotic or bacterial superinfections may occur. Infants may develop increased intracranial pressure with bulging fontanels. Cases of gonorrhea with a suspected primary lesion of syphilis should have darkfield examinations before receiving treatment. In all other cases where concomitant syphilis is suspected, monthly serological tests should be performed for a minimum of 4 months.

Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.

Usual Adult Dose: One Gm./day in 2 or 4 equally divided doses. Continue therapy for ten days in Group A beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

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New Members

Thomas D. Hartnett, M.D., 216 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Hartnett is a native of Chicago, Ill., received his preliminary education at Loyola University and his M.D. degree at the University of Ottawa in 1959. He specializes in psychiatry.

Gary Kulak, M.D., 141 N. Meramec, St. Louis, has become a member of St. Louis Medical Society. Dr. Kulak is a native of Plainfield, N. J., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1965. He specializes in psychiatry.

Richard B. Miller, M.D., 607 N. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Miller is a native of Hartford, Conn., received his preliminary education at the University of Pennsylvania and his M.D. degree at St. Louis University in 1965. He specializes in internal medicine.

Theodore L. Paletta, M.D., 607 N. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Paletta is a native of Arnold, Pa., received his preliminary education at the University of Pittsburgh and his M.D. degree at the Cincinnati Medical School in 1964. He specializes in internal medicine (cardiology).

Daniel D. Pugh, M.D., 1420 Grattan, St. Louis, has become a member of St. Louis Medical Society. Dr. Pugh is a native of Rochester, Minn., received his preliminary education at Carleton College and his M.D. degree at Washington University in 1964. He specializes in psychiatry.

Charles Nash Swisher, M.D., 500 S. Kingshighway Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Swisher is a native of Oxford, England, received his preliminary education at Harvard College and his M.D. degree at McGill Faculty of Medicine in 1965. He specializes in neurology (pediatric).

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County Society News

FIRST DISTRICT

COUNCILOR

JOHN N. MARTIN, M.D., ST. JOSEPH

GRAND RIVER MEDICAL SOCIETY

The Christmas Dinner Party of the Grand River Medical Society was held at the Chillicothe Country Club on Dec. 10, 1971. Guests present were Dr. Joseph L. Fisher, President of the Missouri State Medical Association, and Mrs. Fisher; Dr. John Martin, First District Councilor, and Mrs. Martin; Mr. Ray McIntyre, Executive Secretary of the MSMA and Mrs. McIntyre; and Mr. Royal Cooper, Field Secretary of the MSMA.

Informative and entertaining talks were given by Dr. Fisher, Dr. Martin, Mr. McIntyre and Mr. Cooper.

A program presented by the Chillicothe members of the Woman's Auxiliary to the Grand River Medical Society completed the entertainment.

FRANK R. DALEY, M.D., *Secretary*

SIXTH DISTRICT

COUNCILOR

WILLIAM D. BRADSHAW, M.D., CLINTON

LAFAYETTE-RAY COUNTY MEDICAL SOCIETY

The Lafayette-Ray County Medical Society met at Maib's Cafe in Lexington on Nov. 10, 1970. Twenty-two members and guests were present.

A business meeting followed the dinner. The minutes of the previous meeting were read and approved.

The Society approved a vaccination program set up by the County Health Nurse for county-wide vaccination of grade school children to the age of menarche for rubella.

Following the business meeting, there was an informal discussion concerning reasonable and customary fees as they are related to the two-county medical area.



The "Grand River Christmas Dinner" is always a special event. Dr. Billy D. Howell (*standing*), President of the Society, welcomes those present before introducing the special guests: (*left to right*) Dr. Albert D. Cross and Mrs. Cross, Trenton; Dr. John N. Martin, First District Councilor, and Mrs. Martin, St. Joseph; Doctor Howell; Mrs. Joseph L. Fisher and Doctor Fisher, President of the MSMA, St. Joseph; Mrs. Ray McIntyre and Mr. McIntyre, Executive Secretary of the MSMA, Jefferson City. (Mrs. Howell is seated at the table but is hidden by Doctor Howell.)

The meeting was adjourned following this discussion.

WAYNE BOYDSTON, M.D., *Secretary*

NINTH DISTRICT

COUNCILOR

E. A. STRICKER, M.D., ST. JAMES

SOUTH CENTRAL COUNTIES MEDICAL SOCIETY

The South Central Counties Medical Society met on Dec. 9, 1970 at the Holiday Inn at West Plains. Hosts for the evening were Dr. and Mrs. Jack Wiles. Present were Dr. and Mrs. Jack Glover of Springfield; Dr. and Mrs. C. W. Cooper of Thayer; Dr. and Mrs. R. H. Smith, Dr. and Mrs. C. F. Callihan, Dr. W. T. Morgan and Dr. C. F. Smith of West Plains.

After the dinner, Dr. Jack Glover gave an interesting lecture on "Peritoneal Dialysis and Artificial Kidneys."

A business meeting was held with election of officers and delegates.

JACK N. WILES, M.D., *Secretary*

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April 15-18

Chase-Park Plaza Hotel

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References:

1. Duvoisin, R. C., et al.: *Trans. Amer. Neurol. Assoc.*, 94: 81, 1969.
2. Cotzias, G. C.: *J.A.M.A.*, 210:1255, 1969.

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AMA Congress On Medical Education

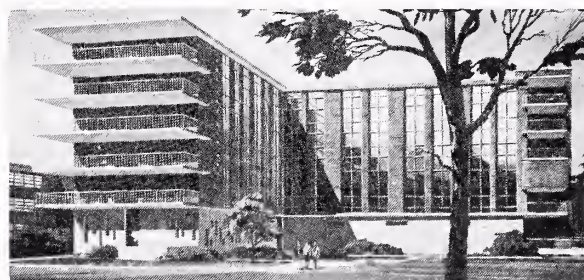
The 67th Annual Congress on Medical Education will be held on February 11-15 at the Palmer House in Chicago.

Presented by the Council on Medical Education of the American Medical Association, the Congress will include programs of the Association for Hospital Medical Education and the Federation of State Medical Boards of the United States on February 12-13. Subjects to be discussed range from "Continuing Medical Education: Planning a Program (A Critical Look at How It's Done)" and "Hospital Funding and Medical Education" to "Allied Health Professions and Paramedical Personnel—Relationship of Responsibility to State Medical Boards" and "The 1971 Examination Institute."

On February 14-15, the Council on Medical Education's program will include subjects such as "The Development of New Medical Schools," "Can the Specialty Boards Respond to Change?" and "Improving Physician Distribution Through Medical Education."

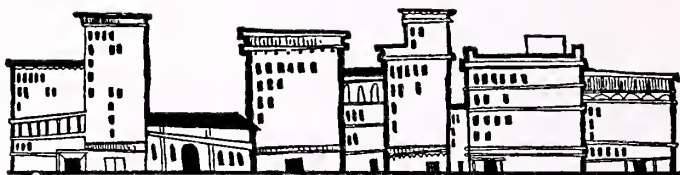
Physicians interested in attending the Congress are invited to request advance registration forms from the Secretary, Council on Medical Education, American Medical Association, 535 N. Dearborn St., Chicago, Ill. 60610.

Missouri State Sanatorium Offers New Facilities



The new Warren E. Hearnes Chest Clinic and Research Pavilion at the Missouri State Sanatorium in Mount Vernon has been completed and is now available as a diagnostic and therapeutic chest center in Missouri. The new, completely modern, six-story building, which contains therapeutic areas for tuberculosis and non-tuberculosis chest diseases, provides for 230 patient beds and supporting services. C. A. Brasher, M.D., is superintendent and medical director at the Sanatorium.

From the Medical Schools



ST. LOUIS UNIVERSITY

Dr. D. Elliott O'Reilly has been named full-time chairman of the Department of Orthopedic Surgery at the St. Louis University School of Medicine. He has served as part-time chairman of the department since 1968 and has been a member of the School of Medicine faculty since 1949. He now holds the academic rank of associate professor of orthopedic surgery. Doctor O'Reilly is orthopedist-in-chief at the St. Louis University Hospitals. He is chief of the orthopedic section and director of the Cerebral Palsy Training Center at Cardinal Glennon Memorial Hospital for children. He also is an active staff member at St. Mary's Hospital and St. John's Mercy Hospital and medical director of the Department of Physical Therapy at St. Louis University. Doctor O'Reilly's offices are at Cardinal Glennon Memorial Hospital for Children.

Dr. Robert H. Felix, dean, School of Medicine, has been named a member of the Technical

Committee on Health 1971 White House Conference on Aging. He attended the first committee meeting in Washington on Dec. 7-8, 1970.

Matthew W. Weis, Jr., has been appointed associate director of Medical Center Development at St. Louis University. His appointment, according to Richard J. Coyle, University vice-president for development, is in line with an increase in the duties of the Medical Center Development Department and the related launching of an effort to raise funds from medical alumni to match a \$9.8 million federal grant. The grant will be used to expand and modernize teaching facilities of the Medical Center. Weis has been with the University since 1959.

Dr. Paul A. Young, acting chairman of anatomy, was recently in Los Angeles to attend an Association of Anatomy Chairmen meeting devoted to new teaching programs in anatomy. He also was in Cincinnati to chair the opening session of the scientific program of the Midwest Association of Anatomists.

Dr. Raymond G. Slavin, director of the Section of Allergy and Immunology, and Dr. James B. Lee, director of the Section of Experimental Medicine, have been elected to active membership in the Central Society for Clinical Research.

Dr. Kilian F. Fritseh, assistant clinical professor of orthopedic surgery, and Dr. Thomas P. Meirink, instructor in orthopedic surgery, received awards from St. Louis University at the St. Louis University annual Football Banquet for their services as a team of doctors in their work. St. Louis University was second among 83 universities competing in University Club Football.

Two spring workshops in the health sciences will be offered by the School of Nursing and Allied Health Professions in February and March.



WASHINGTON UNIVERSITY

Two Washington University School of Medicine faculty members were among 100 nationally prominent persons who have received Ohio State University's Centennial Achievement Award.

Paul E. Lacy, M.D., Ph.D., Edward Mallinckrodt Professor and head of the Department of Pathology, and Carl V. Moore, M.D., Busch Professor and head of the Department of Internal Medicine, received the honor in Columbus in ceremonies at the 100th anniversary of the University's founding. The observance concluded on Dec. 18, 1970.

The 100 recipients were Ohio State alumni, former faculty and others who have contributed outstandingly to the advancement of their professions and society. Represented were persons from the arts, business, education, government and medicine.

Doctor Lacy received the B.A. degree in 1945 and the M.D. and M.Sc. degrees in 1948 from Ohio State University and the Ph.D. degree from University of Minnesota in 1955. He was on the OSU Anatomy Department faculty from 1944 to 1948.

Doctor Moore, who was a member of the Department of Medicine faculty at OSU from 1934 to 1938, received the A.B. degree in 1928 and the M.D. degree in 1932 from Washington University. In 1955, Elmhurst College presented an honorary LL.D. degree to him.

A member of the Washington University faculty since 1955, Doctor Lacy received his present appointment in 1961. Doctor Moore has been on the faculty since 1938. He was promoted to professor of medicine in 1946 and to his present position in 1955.

*

Private funeral services for Dr. Sarah A. Luse, former professor of anatomy and pathology at Washington University School of Medicine, were held on Dec. 31, 1970 in Modesto, Calif.

Doctor Luse died in San Francisco on Dec. 28, 1970. She was a member of the faculty of Columbia University College of Physicians and Surgeons.

Prominent in the field of neuropathology and electronmicroscopy, Doctor Luse joined the Washington University faculty in 1954. In 1963, she was promoted to professor of anatomy and pathology. In 1964, she was named acting head of the Department of Anatomy, a position she held until 1967 when she left to accept the Columbia University appointment.

MISSOURI UNIVERSITY

The University of Missouri-Columbia Medical Center has been unable to escape the increasing costs involved in the provision of health care, Dr. William D. Mayer, dean and director, said on January 1, in announcing certain increases in its charge schedule, which became effective on Jan. 1, 1971.

Noting that nationwide hospital costs increased 17% in 1970, Doctor Mayer said, "Costs have gone up primarily because of higher wage levels and higher prices charged for the supplies and equipment required in the provision of health care." He also pointed out that care in large medical centers and teaching hospitals frequently includes specialized services and equipment not available in many smaller community hospitals.

In the past, the schedule of charges for services provided in University Hospital has been based on the estimated cost of the provision of those services, Doctor Mayer said. He added that the same policy is being carried out in the current rate increases.

With the approval of the University administration, room rates will be increased by \$9 per

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day and charges for many ancillary services also will go up. It is estimated that the average charge per patient per day will increase by \$18.

A private room in University Hospital, including general nursing care, food service, house-keeping, linens, supplies and some medications, will now cost \$55 a day, as compared with a charge of \$46 during the past year. A two-bed room will cost \$52, up from \$43; a four-bed ward, \$49 per bed, up from \$40. Intensive care charges are generally increased by \$10 per day.

Operating room charges, anesthesia, prosthetic and brace devices, casts, laboratory tests and emergency room visits also are affected by the rate increases. Most laboratory tests increase 50 cents. Whereas the emergency room fee has been \$6 per visit, it will go to \$7.

Administrators of the Medical Center estimate that the increased charges will result in additional revenue of about \$250,000 between January 1 and June 30.

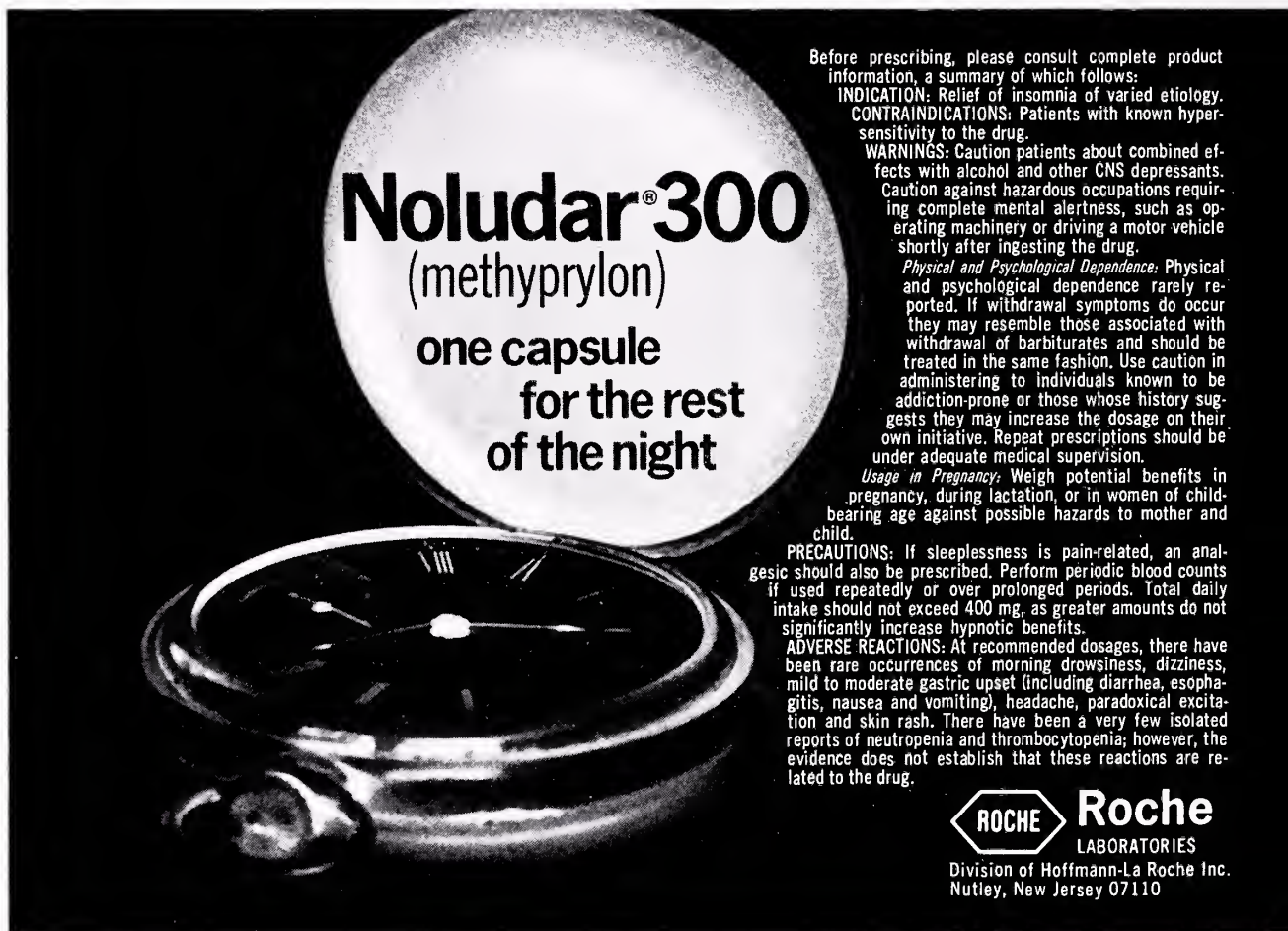
"This revision of rates is only one measure instituted by the Medical Center to relieve severe financial strain caused by escalating oper-

ating costs during a year in which the state legislature provided no increase in funds over those of the previous year," Doctor Mayer said.

"Cutbacks in salaries and wages are expected to effect a major savings in the second half of the fiscal year," Doctor Mayer said, "but contrary to rumors of many layoffs among employees, I want to make it clear that much of the savings in wages is occurring because we are not replacing employees as they retire or resign." He added that there have been some layoffs, but only a small number in relation to the total employment at the Medical Center.

*

Two floors of McHaney Hall, used primarily as a rehabilitation center of the University of Missouri-Columbia Medical Center, will be closed as part of the solution to that institution's fiscal problems, Dr. William D. Mayer, dean and director, announced on January 3. The closing of these floors, representing a reduction of 36 beds, is estimated to save approximately \$130,000 between January 4 and June 30, 1971.



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Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of child-bearing age against possible hazards to mother and child.

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ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

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Medical Museum Receives Unusual Donations

Twenty-three medical equipment and surgical instrument catalogs and other memorabilia from the old A. S. Aloe Company in St. Louis, now a division of Sherwood Medical Industries, Inc., have been donated by Sherwood to the Medical Historical Museum of the St. Louis Medical Society. Sherwood vice-president and director of administration and planning, Kenneth A. Marshall made the presentation to Hollister S. Smith, the society's Executive Secretary.

The catalogs, which cover years from 1899 to 1950, illustrate the advances in medical techniques against the backdrop of our changing economy, as well as concomitant developments in advertising and merchandising techniques. Aloe is a nationwide distributor of medical products.

The collection also includes a copy of an 1894 Aloe artists' supply catalog, a veterinary supply catalog and an 1881 handbill advertising spectacles and opera glasses.



Mr. Hollister S. Smith, Executive Secretary, accepts historical memorabilia for the St. Louis Medical Society's Medical Historical Museum from Mr. Kenneth A. Marshall of Sherwood Medical Industries, Inc.

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MSMA 113TH ANNUAL SESSION

April 15-18

St. Louis

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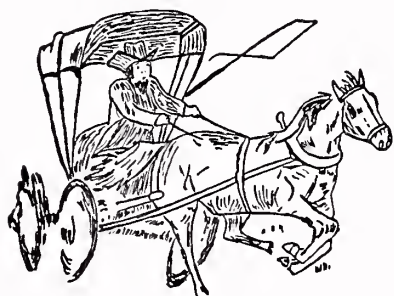
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Missouri Medicine in Review



FORTY YEARS AGO

It is gratifying to note in the report of the United States Public Health Service that there was no instance of importation from abroad of any quarantinable disease into the United States during the year ending in June, 1930. Of passengers who embarked at European ports, 56,115 were vaccinated and 74,509 were deloused under supervision of medical officers of the service. The clothing and baggage of these passengers amounted to 96,381 pieces. Special precautions were taken during the year because of an outbreak of cholera in the Philippine Islands, the presence of yellow fever on the Gold Coast of Africa and in South America and the flare-up of psittacosis in November, 1929.

In the biennial report of the Board of Curators of the University of Missouri to the state legislature, an appropriation of \$8,032,545 was requested for expansion and maintenance during the next two years. Salaries represent the largest increase and there is no question about the need for increasing the salaries because the staff is being depleted by teachers going to schools where the salaries and working conditions are more attractive.

The American Board of Obstetrics and Gynecology, composed of nine members and examiners for the purpose of granting certificates indicating proficiency and specialization in obstetrics or gynecology or both, was organized in Niagara Falls on Sept. 16, 1930. The first examination of candidates will be held simultaneously in 19 cities on March 14, 1931. Dr. G. D. Royston, St. Louis, is one of the members of the board which was elected by the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, the American Gynecological

Society and the Section of Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association.

TWENTY-FIVE YEARS AGO

In 114 colleges which do not sponsor any type of tuberculosis program, student enrollment was 121,133. Fourteen students were found to have tuberculosis, a rate of 12 per 100,000. On the basis of this year's experience, therefore, colleges with case-finding programs diagnosed 18 cases of tuberculosis for each case diagnosed at those schools having no program. Such evidence would leave no doubt as to the wisdom of employing modern case-finding methods in every college. Of the 622 new cases of tuberculosis among students, 73% of all new patients who were diagnosed during the year were permitted to remain in college.

Physicians who are reentering practice after returning from service are eligible to receive unemployment compensation if their net earnings are less than \$100 monthly. This is handled by the United States Employment Service.

Dr. Harry B. Stauffer, Jefferson City, was elected president of the hospital staff of St. Mary's Hospital at a meeting on December 19.

Senate Bill No. 349, creating a Department of Public Health and Welfare, was introduced on January 10 by Senator W. H. Robinett of Mountain Grove.

TEN YEARS AGO

William B. Lytton, M.D., Ladue, was elected president of the medical staff of St. Vincent's Hospital in Pagedale recently. Murray E. Finn, M.D., St. Louis, was elected vice-president and S. R. Banet, M.D., St. Louis was elected secretary.

The Woman's Auxiliary to the Saline County Medical Society has contributed \$340 to the University of Missouri to add to the revolving student loan fund at the School of Medicine, it was announced by Dean Vernon E. Wilson. The donation is to be used especially for loans to students in the School of Nursing or in medical technology.

The Central Missouri Chapter of the American College of Surgeons has elected Dr. J. A. Ossman, Jefferson City, as president and Dr. James C. Cope, Columbia, as vice-president.

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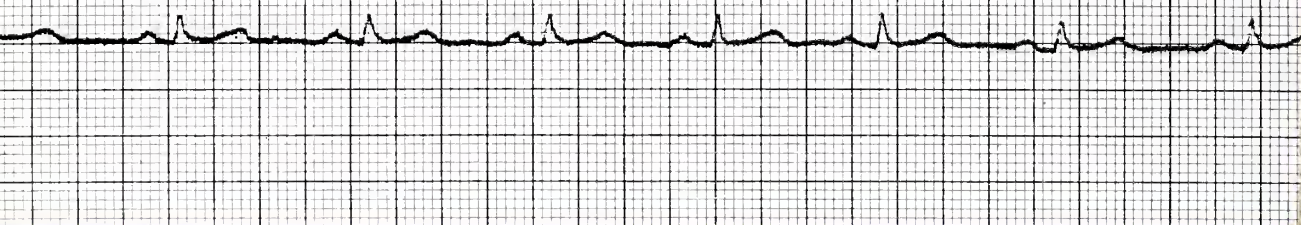
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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation

or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



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Missouri Medicine

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VOLUME 68, NUMBER 3

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- MSMA 113th Annual Session 148

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113th MSMA Annual Session
April 15-18, St. Louis

IF MORE MEN CRIED

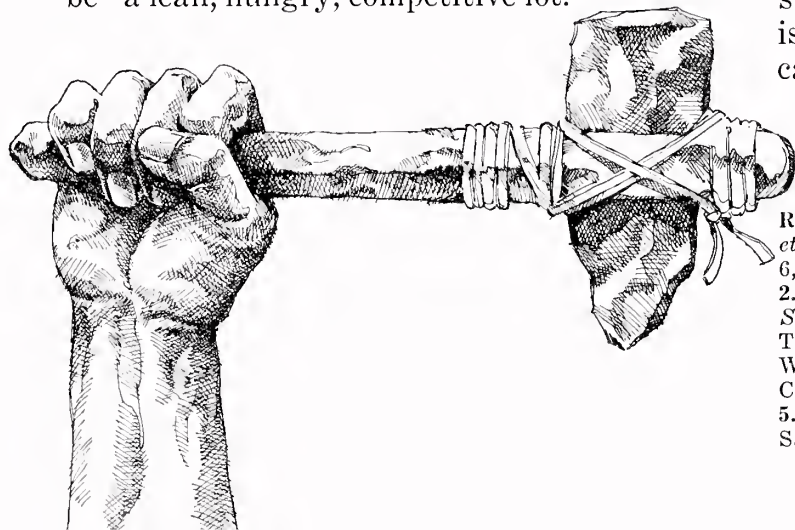


At least seventy-five out of one hundred adults with duodenal ulcers are men.¹

Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."²

Hypersecretion—an atavistic response. Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."²

By chance? A lean, hungry lot. Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."³



Big boys don't cry. If more men cried maybe fewer would wind up with duodenal ulcers. But men will be men—the sum total



their genes and what they are taught. Schottstaele observes that when a mother admonishes her son who has hurt himself that big boys don't cry, she is teaching him stoicism.⁴ Crying is the negation of everything society thinks of as manly. A boy starts defending his manhood at an early age.

Take away stress, you can take away symptoms.

There is no question that stress plays a role in the etiology of duodenal ulcers. Alvarez⁵ observes that many a man with a duodenal ulcer loses his symptoms the day he shuts out the office and starts out on a vacation. The problem is, the type of man likely to have a duodenal ulcer is the type least likely to take long vacations or take it easy at work.

The rest cure vs. the two-way action of Librax.[®] For most patients, the rest cure is as unrealistic as it is desirable. Still, the stress factor must be dealt with. And here is where the dual action of adjunctive Librax can help. Librax is the only drug that combines

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M. J. et al. (eds.): *Harrison's Principles of Internal Medicine*, 6, New York, McGraw-Hill Book Company, 1970, p. 14. 2. Wolf, S., and Goodell, H. (eds.): *Harold G. Wolff: Stress and Disease*, ed. 2, Springfield, Ill., Charles C. Thomas, 1968, pp. 68-69. 3. *Ibid.*, p. 257. 4. Schottstaele, W. W.: *Psychophysiologic Approach in Medical Practice*, Chicago, Ill., The Year Book Publishers, Inc., 1960, p. 1. 5. Alvarez, W. C.: *The Neuroses*, Philadelphia, Pa., W. B. Saunders Company, 1951, p. 384.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, over-sedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

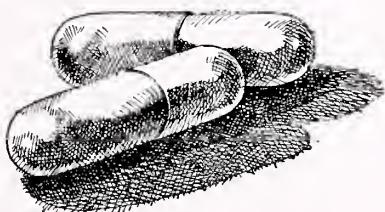
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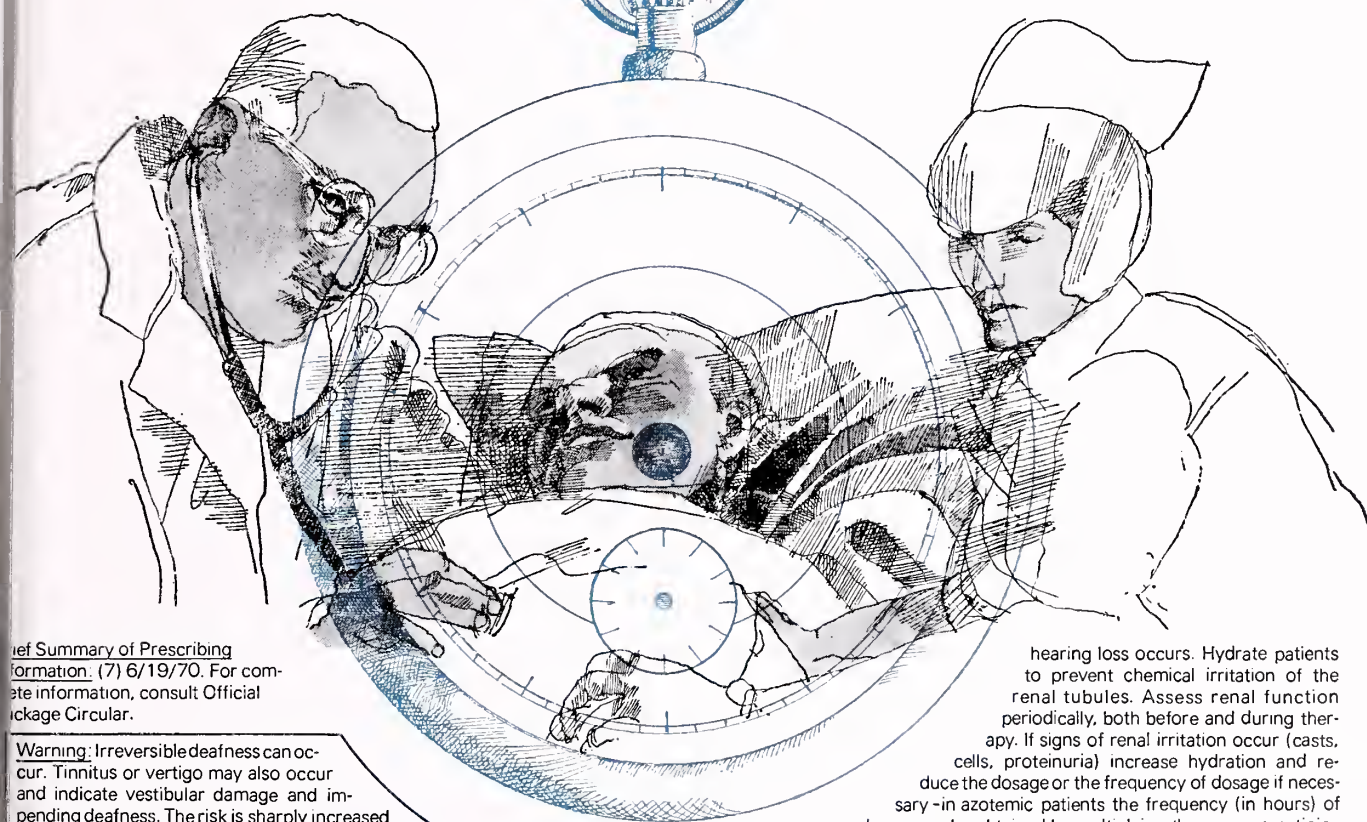
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Indications: Serious infections due to susceptible strains of *E. coli*, *Proteus* sp., *aerogenes*, *K. pneumoniae*, *Serratia marcescens* and *Mima-Herellea*. Culture and sensitivity studies should be performed.

Contraindications: A history of hypersensitivity to the drug. Prior auditory damage or kanamycin or other agents may be a contraindication if effective alternative therapy is available.

Precautions: Obtain audiograms before and during therapy in patients with renal dysfunction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or

hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules. Assess renal function periodically, both before and during therapy. If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary—in azotemic patients the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy. Mycotic or bacterial superinfection may occur.

Adverse Reactions: Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias.

Dosage and Administration: The maximum total daily dose should not exceed 1.5 Gm. by all routes of administration. The usual dose is 7.5 mg./Kg./12 hours I.M. The average adult dose is 1 Gm. daily. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.

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Preliminary Program
113th Annual Session

MISSOURI STATE MEDICAL ASSOCIATION

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April 15-18, 1971

Thursday, April 15

- 8:00 AM Registration for New Member Orientation Program.
- 8:30 AM New Member Orientation Program.
- 11:00 AM Registration of Delegates.
- 1:30 PM House of Delegates Meeting, opening session.
- 4:30 PM Reference Committee Meetings.

Friday, April 16

- 8:00 AM Registration.
- 9:00 AM *Medicare-Medicaid, Why the High Cost?*
 Moderator: B. J. Bass, M.D., Salem.
 Panel Participants:
Viewpoint of the Practicing Physician, John T. Crowe, M.D., Cape Girardeau.
 (Balance of Participants to be announced.)
- 10:30 AM Intermission to view exhibits.
- 11:00 AM Continuation of *Medicare-Medicaid Program*.
- 11:00 AM *Parkinson's Disease* (Sponsored by St. Louis Society of Neurological Sciences.)
 Panel Participants:
The Effects of L-Dopa on Parkinson's Disease, George H. Klinkerfuss, M.D., St. Louis.
Surgical Aspects of Parkinson's Disease, Claude Bertrand, M.D., Montreal, Canada.
- 12:00 Noon MSMA Maternal Welfare Luncheon (Sponsored by the Missouri Obstetrical and Gynecological Society.)
 University of Missouri Alumni Luncheon.
- 2:00 PM *Drinking, Drugs, Dropping Out and Dissent* (Sponsored by the Missouri Academy of Psychiatry.)
 Moderator: David Davis, M.D., Columbia, President, Missouri Academy of Psychiatry.
Biological and Behavioral Aspects of Alcoholism, Jack H. Mendelson, M.D., Boston, Mass.
 Panel Participants:
 R. Raymond Knowles, M.D., St. Louis.
 Donald W. Goodwin, M.D., St. Louis.
- 2:00 PM *Organization for Emergency Department Care*.
 Moderator: Oscar P. Hampton, Jr., M.D., St. Louis, Assistant Director, Trauma Activities, American College of Surgeons.
 Panel Participants:
 J. Cuthbert Owens, M.D., Denver, Colo.
 Louis P. Hetlage, M.D., Troy.
- 2:45 PM *Induction of Ovulation*, James C. Warren, M.D., Kansas City, Kan. (Sponsored by Missouri Obstetrical and Gynecological Society.)
- 3:30 PM Intermission to View Exhibits.
- 4:00 PM House of Delegates, second session.
- 5:30 PM Missouri State Medical Foundation Annual Meeting.
- 6:00 PM Reference Committees.

Saturday, April 17

- 8:00 AM Registration.
- 9:00 AM *The Rapid Treatment of Sexual Dysfunction*, Marshall L. Shearer, Jr., M.D., St. Louis and Marguerite R. Shearer, M.D., St. Louis.
 Moderator: Richard W. Yore, M.D., St. Louis.

- 9:00 AM *Symposium on Coronary Artery Disease* (Jointly sponsored by Missouri State Surgical Society and Missouri Heart Association.)
Moderator: Brent M. Parker, M.D., President, Missouri Heart Association.
Panel Participants:
Indications for Coronary Arteriography, J. Gerard Mudd, M.D., St. Louis.
Medical Therapy for Angina Pectoris, Gerald A. Wolff, M.D., St. Louis.
Surgical Therapy—Coronary Artery By-Pass Grafts, George C. Kaiser, M.D., St. Louis.
Carotid Sinus Nerve Stimulator Implantation, Arthur E. Baue, M.D., St. Louis.
- 10:30 AM Intermission to View Exhibits.
- 11:00 AM Panel on *X-Ray Negative Upper G I Bleeding*.
Moderator: Edward D. Kinsella, M.D., St. Louis.
Panel Participants:
The Role of the Surgeon, Walter F. Ballinger, M.D., St. Louis. (Sponsored by the Missouri State Surgical Society.)
The Diagnosis of Upper Gastrointestinal Bleedings by Angiography, P. Ruben Koehler, M.D., Salt Lake City, Utah. (Sponsored by Missouri Radiological Society.)
Contribution of Endoscopy to the Diagnosis of Upper Gastrointestinal Bleeding, John F. Morrissey, M.D., Madison, Wisc. (Sponsored by Missouri Society of Internal Medicine.)
- 11:00 AM *Some Ocular Manifestations of Diagnostic Aid in Medicine and Dermatology*, H. Saul Sugar, M.D., Detroit, Mich. (Sponsored by Missouri Ophthalmological Society, Inc.)
Moderator: Robert C. Drews, M.D., Clayton.
- 11:45 AM Panel on *Otolaryngology*.
Moderator: Joseph H. Ogura, M.D., St. Louis.
Panel Participants:
The External Ear-1971, Donald G. Sessions, M.D., St. Louis.
Cervical Maxillofacial Trauma, Mark May, M.D., St. Louis.
Highlights in Treatment of Head and Neck Cancers, Joseph H. Ogura, M.D., St. Louis.
- 12:30 PM General Luncheon.
Fifty-Year Club Luncheon.
Missouri Ophthalmological Society Luncheon.
- 2:30 PM *Different Systems for Delivery of Health Care*.
Moderator: George H. Ladyman, M.D., Poplar Bluff.
Panel Participants:
National Health Insurance, Mr. Robert J. Myers, Silver Spring, Maryland.
Group Practice, Edward M. Wurzel, M.D., Executive Director, American Association of Medical Clinics, Alexandria, Va.
Prepaid Plans, C. C. Cutting, M.D., Executive Director, The Permanente Medical Group, Oakland, Calif.
- 2:30 PM *Smallpox Vaccination*, James D. Cherry, M.D., St. Louis. (Sponsored by Missouri Chapter, American Academy of Pediatrics.)
Moderator: Francis X. Lieb, M.D., St. Louis.
- 3:15 PM *Immunosuppressive Drug Therapy in Connective Tissue Diseases*, William E. Reynolds, M.D., Medical Director, The Arthritis Foundation, New York, N. Y.
Moderator: Robert H. Ramsey, M.D., Florissant.
Panel Participants:
Lester E. Wolcott, M.D., Columbia.
Jack Zuckner, M.D., St. Louis.
Sherwyn J. Wayne, M.D., St. Louis.
(Sponsored by the St. Louis Rheumatism Society.)
- 4:00 PM Intermission to View Exhibits.
- 6:30 PM Social Hour for those attending the Banquet.
- 7:15 PM Annual Banquet in Honor of Past Presidents of MSMA.
Guest Speaker, Russell B. Roth, M.D., Erie, Pa., Speaker of the House of Delegates, American Medical Association.

Sunday, April 18

- 7:30 AM House of Delegates Meeting, breakfast and final session.

OFFICIAL DELEGATES

113th MSMA Annual Session

<i>County</i>	<i>Delegates</i>	<i>Alternates</i>
Andrew.....	Gilbert B. Kelley, Savannah.....	J. L. Villahermosa, Savannah
Audrain.....	Charles L. Garcia, Mexico.....	Ben N. Jolly, Mexico
Barton.....	Thomas W. Carroll, Lamar.....	Alvin R. Cain, Lamar
Boone.....	John Walters, Columbia.....	Kenneth Keown, Columbia
".....	William See, Columbia.....	David Hall, Columbia
".....	Robert Jackson, Columbia.....	B. A. Moranville, Columbia
".....	John Logue, Columbia.....	Reginald Pugh, Columbia
".....	Hugh Stephenson, Columbia.....	Ray Lewis, Columbia
".....	George Wilson, Columbia.....	Thomas Burns, Columbia
Buchanan.....	William B. Rost, St. Joseph.....	R. Philip Acuff, St. Joseph
".....	Richard V. Riddell, St. Joseph.....	G. Tyson Carpenter, St. Joseph
".....	Ernest E. Wadlow, St. Joseph.....	Allen I. Herman, St. Joseph
Butler-Wayne- Ripley.....	George H. Ladyman, Poplar Bluff.....	Fred Caldwell, Poplar Bluff
".....	Harold H. Cline, Piedmont.....	Richard V. Camp, Jr., Poplar Bluff
".....	Gene Leroux, Doniphan.....	T. E. Ruff, Poplar Bluff
Callaway.....		
Cape Girardeau.....	Edwin Burford, Cape Girardeau.....	James Dinkins, Cape Girardeau
".....	Melvin C. Kasten.....	Jerry L. Kinder, Cape Girardeau
".....	Harold B. Rapp.....	Earl Johnson, Cape Girardeau
Carter-Shannon.....	Harry D. Rollins, Winona.....	
Chariton-Macon- Monroe- Randolph.....	D. D. Stuart, Brunswick.....	F. L. Harms, Salisbury
".....	J. E. Campbell, Macon.....	Donald Eggleston, Macon
".....	F. A. Barnett, Paris.....	W. D. Chute, Moberly
".....	R. V. Tompson, Moberly.....	P. V. Dreyer, Huntsville
Clay.....	Richard P. Bowles, Liberty.....	William R. McPhee, Kansas City
".....	Charles I. Fowler.....	Truman B. Schertz, N. Kansas City
".....	Chris K. Fotopoulos.....	Van M. Robinson, Kansas City
Clinton.....	P. T. Luckenbill, Plattsburg.....	L. A. Ozenberger, Plattsburg
Cole.....	Robert E. Bregant.....	Earl L. Loyd, Jefferson City
".....	Robert H. Tanner.....	G. Donald Shull, Jefferson City
".....	Byron E. Watts, Jefferson City.....	C. Stuart Exon, Jefferson City
Cooper.....	Byron M. Stuart, Boonville.....	G. W. Winn, Boonville
Dallas-Hickory- Polk-Dade.....	O. A. Griffin, Buffalo.....	Evelyn Griffin, Buffalo
".....	George Robinson, Humansville.....	C. H. Barnett, Bolivar
".....	Doyle C. McCraw, Bolivar.....	Ben Koon, Bolivar
".....	Lee A. McNeel, Jr., Greenfield.....	Harold A. Bauer, Lockwood
Dunklin.....	Charles R. Cash, Kennett.....	
Franklin- Gasconade- Warren.....	James G. Shea, Gerald.....	William Richardson, Union
".....	George Workman, Hermann.....	Louis Jorel, Hermann
".....	Harold Hoelscher, Warrenton.....	H. W. Eyermann, Warrenton
Grand River.....		
Caldwell.....	Frank Daley, Hamilton.....	George Mandler, Chillicothe
Carroll.....	John Platz, Carrollton.....	Erroll Allen, Carrollton
Daviess.....	J. Larry Dowell, Chillicothe.....	Ralph W. Bolnsack, Brookfield
DeKalb.....	Eugene Bales, Carrollton.....	Billy D. Howell, Brookfield
Grundy.....	Albert Cross, Trenton.....	William Fuson, Trenton
Harrison.....	Merriam Gearhart, Bethany.....	Willard Ellsworth, Cainsville
Linn.....	John Dixon, Brookfield.....	Robert W. Smith, Brookfield

<i>County</i>	<i>Delegates</i>	<i>Alternates</i>
Livingston.....	Joseph Conrad, Chillicothe	William Fair, Chillicothe
Mercer.....	Windsor Ateheson, Trenton	Oliver Duffy, Trenton
Greene.....	Stanley S. Peterson, Springfield	Yates Trotter, Springfield
"	M. D. Bonebrake, Springfield	Cecil Auner, Springfield
"	Carle Schroff, Springfield	J. Lynn Ferguson, Springfield
"	Robert Maher, Springfield	Walter A. German, Springfield
"	William M. Walker, Springfield	Gordon Wise, Springfield
"	James T. Brown, Springfield	James S. Key, Springfield
Henry.....	James O. Smith, Clinton	Richard H. King, Clinton
Howard.....	William G. Marshall, Glasgow	W. A. Bloom, Fayette
Jackson.....	Sidney Rubin, Kansas City	Edward P. Altomare, Kansas City
"	James S. White, Kansas City	John L. Barnard, Kansas City
"	Pat A. Barelli, Kansas City	James D. Bennett, Kansas City
"	Hector W. Benoit, Jr.	Calvin E. Engelmann, Kansas City
"	Martin L. Crow, Kansas City	Edward E. Haith, Kansas City
"	Robert W. Forsythe	William D. Hoadley, Kansas City
"	Fred D. Fowler, Kansas City	Harry S. Jonas, Jr., Independence
"	William W. Gist, Kansas City	Paul G. Koontz, Kansas City
"	Kenneth C. Hollweg, Kansas City	Rodger W. Lambie, Kansas City
"	Otis E. James, Jr., Kansas City	Stacy Long, Kansas City
"	William A. Leo, Kansas City	Andrew McCanse, Kansas City
"	George J. Lytton, Kansas City	Victor G. McDonald, Kansas City
"	Frederick J. McCoy	Robert A. Moore, Kansas City
"	Wallace P. McKee	Mark D. Ost, Kansas City
"	John H. Mayer, Jr., Kansas City	Wayne K. Tice, Independence
"	William C. Mixson, Kansas City	James W. Vaughn, Kansas City
"	Carl M Peterson, Kansas City	
"	Robert A. Slickman	
"	Donald M. Spencer, Kansas City	
"	Walter J. Stelmach	
"	Raymond W. Stockton	
"	Edward H. Stratemeier	
"	C. Y. Thomas, Jr., Kansas City	
"	Charles B. Wheeler, Jr.	
"	C. Keith Whittaker, Kansas City	
"	Gordon C. Sauer, Kansas City	
"	O. Dale Smith, Mission, Kansas	
Jasper.....	John R. Esther, Joplin	Grover S. Patterson, Joplin
"	Herbert J. Schmidt, Joplin	C. B. Schoeberl, Joplin
"	W. Russell Smith, Joplin	Patrick Butler, Joplin
Jefferson.....	H. E. Donnell, De Soto	J. Logan Mayfield, Crystal City
Johnson.....		
Lafayette-Ray...	W. E. Koppenbrink	Jordan Kelling, Waverly
"	Higginsville	
"	Herbert Huber, Richmond	Franklin A. Crozier, Richmond
Lewis-Clark-		
Scotland.....	Landis Y. Davis, Canton	

<i>County</i>	<i>Delegates</i>	<i>Alternates</i>
"	Earl E. Gilfillan, Memphis	
Marion-Ralls-		
Shelby	Albert Grant, Hannibal	James R. Mann, Hannibal
"	Thomas Fischer, Hannibal	Edward Plowman, Hannibal
"	Charles Lichty, Shelbina	Stanley Hall, Hannibal
Mid-Missouri		
Laclede		
Pulaski		
Dent		
Phelps		
Maries		
Crawford		
Miller		
Mineral Area		
St. Francois		
Iron		
Madison		
Washington		
Reynolds		
Bollinger		
Moniteau	L. M. Gallagher, California	Richard B. Fulks, California
Montgomery	S. J. Byland, Wellsville	J. O. Helm, New Florence
Morgan	C. Robert Hall, Versailles	J. Loren Washburn, Versailles
North Central		
Adair	Spencer L. Freeman, Kirksville	Milton T. English, Kirksville
Knox	Francis Tarvydas, Edina	Waldo B. Isom, Knox City
Schuyler		
Sullivan		
Putnam		
Northwest		
Nodaway	Elvin D. Imcs, Maryville	Henry C. Bauman, Maryville
Holt	James Humphrey, Mound City	Robert E. Dunshee, Maryville
Atchison	Edward L. Niedermeyer, Tarkio	John M. Wanamaker, Rock Port
Gentry	Bernie Parsons, Albany	
Worth	Frank B. Matteson, Grant City	G. Raymond Wempe, Maryville
Ozarks		
Barry		
Lawrence		
Stone		
Christian		
Taney		
Newton		
McDonald		
Pemiscot	O. W. Cook, Caruthersville	Alan S. Gubin, Caruthersville
Perry-Ste.		
Genevieve	Lawrence W. Feltz, Perryville	G. H. DeGenova, Ste. Genevieve
"	J. F. Lutkewitte, Ste. Genevieve	James F. Fairchild, Perryville
Pettis	A. J. Campbell, Sedalia	A. R. Maddox, Sedalia
Pike		
Platte		
St. Charles-		
Lincoln	Paul Rother, St. Charles	William Poggemeier, St. Charles
"	L. P. Hetlage, Troy	Paul T. Berry, Troy
St. Louis City	Lawrence W. O'Neal, St. Louis	Charles C. Abel, St. Louis
"	F. Eugene Pennington	George C. Anstey, St. Louis
"	St. Louis	
"	Paul L. Friedman, St. Louis	Matt H. Backer, Jr., St. Louis
"	William E. Allen, Jr., St. Louis	Virginia M. Badger, St. Louis
"	Ralph L. Bidby, St. Louis	Grace E. Bergner, St. Louis
"	Armand E. Brodeur, St. Louis	John W. Berry, St. Louis

Senate Bills 7, 9 Passed, on To House

Two bills of interest and importance to Missouri physicians and supported by the Missouri State Medical Association were among the first passed this year by the Missouri State Senate and sent on to the House.

Given third reading and final passage in the Senate on Tuesday, February 16 were Senate Bills 7 and 9, both sponsored by Senator Albert Spradling, Cape Girardeau.

Senate Bill 7 would provide that transactions involving transfusion of blood and the transplanting of organs are a service and not subject to any implied warranties. The bill is considered most important since recent court decisions on this matter.

Senate Bill 9 would require physicians, dentists and podiatrists applying for membership on a county hospital staff to provide on written form information concerning training and qualifications and accept the board as supreme governing authority of the hospital. The professional staff of the hospital would be in charge of professional activities.

Both Senate Bills 7 and 9 awaited assignment to a House Committee as of February 17.

Members of MSMA are urged to contact their Missouri State Representatives and urge support of both Senate Bills 7 and 9.

The status of other bills as reported on in the February edition of **MISSOURI MEDICINE** included:

House Bill 79, which would broaden practice of chiropractors, was in the House Public Health and Safety Committee. Proponents were to be heard on February 17 with opponents scheduled to be heard on February 23.

House Bill 73 would permit a minor to receive medical treatment without parental consent. A House Committee substitute for the bill is awaiting action on the House perfection calendar.

House Bill 116 would permit

minors between 18 and 21 years of age to donate blood without consent of parent or guardian. Bill has been passed by House and awaits a Senate Committee hearing.

Senate Bill 28, a good Samaritan bill, has had a hearing in the Senate Judiciary Committee, but no action has been taken by the Committee.

Among bills introduced since January 15, include:

Senate Bill 137, sponsored by Senator Linehan, would place Blue Cross and Blue Shield under the Insurance Department. Bill assigned to Senate Banking Committee. House Bill 583, on same subject, introduced by Representative Walsh, assigned to House Insurance Committee. Neither Committee had scheduled a hearing as of February 17.

House Bill 238, sponsored by Representative Gann, would reduce from .15 percent to .10 percent the weight of alcohol present in blood to indicate a driver is intoxicated. Hearing at 8 p.m., Wednesday, March 3, in House Civil and Criminal Procedures Committee.

House Bill 147, introduced by Representative Downing, would license psychologists under a new, separate board. Hearing held in Governmental Affairs Committee. No action.

House Bill 274, introduced by Representative Spain, authorizes the State to pay private medical or osteopathic schools \$4,000 a year in contract per student for the education of Missourians.

Bill has been reported out, do pass, by House Public Health Committee and is on House perfection calendar.

House Bill 317, introduced by Representative Heckmeyer, would establish radiological technologists and create boards for examiners, including one for chiropractic personnel. Bill assigned to House License Committee. No hearing set.

New Health Law

The United States Congress on December 31, 1970 passed the Emergency Health Personnel Act of 1970 which authorizes the Secretary of Health Education and Welfare to assign commissioned officers and other Public Health Service personnel to provide health care and services for persons residing in areas which are designated as areas of critical health manpower shortage.

State and county medical societies in the area seeking the emergency health personnel would have to certify to the Secretary of Health Education and Welfare that such health personnel are needed for their area.

The action would be initiated by a request of a state or local health agency or other public or non-profit private health organization.

Authorization for this program is \$10 million for fiscal 1971, \$20 million for fiscal 1972 and \$30 million for fiscal 1973.

MSMA
News

AT OFFICER'S CONFERENCE

Will Study Physician Distribution

The appointment of a task force to establish a system to determine exactly how many physicians are now in practice and where has been announced by Dr. Herbert R. Domke, acting director of the State Division of Health.

"More doctors for Missouri has been designated by the State Board of Health as the State's top priority in health programming," Domke said, "and we need a system to tell us today and five years from now how much and where we need to increase physician manpower."

Dr. O. T. Anderhalter, director of research methods at St. Louis University, will serve as chairman of the special task force on physician manpower, Domke said.

Others named to the task force were: John A. Hailey, Executive Secretary of the State Board of Healing Arts, Jefferson City; Edward Borman, Jr., Executive Secretary of the Missouri Association of Osteopathic Physicians and Surgeons, Jefferson City; Raymond R. McIntyre, Executive Secretary of the Missouri State Medical Association, Jefferson City; Dr. George E. Gantner, Jr., St. Louis, representing Bi-State Regional Medical Program; Dr. H. Denny Donnell, Columbia, representing Missouri Regional Medical Program; and Dr. Edmund Cross, U.M.K.C. Medical School, Kansas City.



PROGRAM PARTICIPANTS - Shown above are some of the participants from the 1971 Fourth Annual County Society Officer's Conference of the Missouri State Medical Association held January 30 and 31 in Jefferson City. In the top photo, left to right, are Bolivar Herald-Free Press Publisher, Jac Zimmerman; MSMA President, Joseph L. Fisher, M.D.; St. Louis Globe-Democrat reporter, Sue Ann Wood; and Fulton Sun-Gazette Publisher, Donald Stimble. In the bottom photo are Roger Greenlaw, M.D., an intern at the University of Missouri-Columbia Medical Center; Richard Wilbur, M.D., Deputy Executive Vice President of the American Medical Association; Arthur W. Neilson, M.D., St. Louis, a Missouri delegate to the AMA; President Fisher; and Richard Bowles, M.D., Liberty, immediate Past President of the Clay County Medical Society and chairman of the Ad Hoc Committee, which planned the conference. (Photos by Gary Schnedler)

"Our basic assignment is to develop methods that will provide accurate information on a continuing basis about the distribution of physicians in the State," Dr. Anderhalter said in accepting chairmanship of the task force.

"We want to know who is taking care of patients and where," he explained, "and this information is not available from existing sources. We know, for example,

that most physician registration lists include some doctors who actually are retired but still licensed, as well as other doctors who are not in practice or who have temporary licenses while in training."

Anderhalter said that interns and residents will be included but will be studied from a different viewpoint than established physicians.

<i>County</i>	<i>Delegates</i>	<i>Alternates</i>
"	Helen L. Bruce, St. Louis	Stephen F. Bowen, Jr. St. Louis
"	Kenneth Bruns, St. Louis	Robert D. Brooks, St. Louis
"	Marshall B. Conrad, St. Louis	Stanley J. Ciapciak, St. Louis
"	Mark D. Eagleton, St. Louis	Thomas J. Cooper, St. Louis
"	John P. Eberle, St. Louis	William S. Cox, St. Louis
"	Joseph C. Edwards, St. Louis	William H. Danforth, St. Louis
"	Richard H. Fallon, St. Louis	Richard K. Danis, St. Louis
"	Robert H. Felix, St. Louis	Francis G. Duffy, St. Louis
"	Thomas B. Ferguson, St. Louis	Edwin C. Ernst, Jr., St. Louis
"	Max S. Franklin, St. Louis	Clement B. Grebel, St. Louis
"	August W. Geise, Jr., St. Louis	Eugene G. Hamilton, St. Louis
"	Charles R. Gulick, St. Louis	Fleming B. Harper, St. Louis
"	Stanley F. Hampton, St. Louis	Ronald E. Hoffman, St. Louis
"	George L. Hawkins, Jr.	Karl A. Jacob, Jr., St. Louis St. Louis
"	Charles A. Jost, St. Louis	Otey S. Jones, St. Louis
"	Donald R. Judd, St. Louis	M. Kenton King, St. Louis
"	Robert W. Kelley, St. Louis	R. R. Knowles, St. Louis
"	G. Lynn Krause, Jr., St. Louis	Robert E. Kuhlman, St. Louis
"	Charles B. Ladd, St. Louis	William M. Komanetsky, St. Louis
"	Lawrence M. Lawton, St. Louis	Paul U. Larson, St. Louis
"	J. Eugene Lewis, St. Louis	Thomas F. Maher, Jr., St. Louis
"	Francis X. Lieb, St. Louis	Stanley G. McCool, St. Louis
"	William L. Macon, St. Louis	R. Bruce McCloskey, St. Louis
"	Paul F. Max, St. Louis	Edward J. Miller, St. Louis
"	Arthur W. Neilson, St. Louis	Robert N. Miller, St. Louis
"	Hubert A. Ritter, St. Louis	D. Elliott O'Reilly, St. Louis
"	John S. Sciortino, St. Louis	George B. Rader, St. Louis
"	Charles S. Sherwin, St. Louis	John D. Radke, St. Louis
"	William L. Smiley, St. Louis	S. David Rockoff, St. Louis
"	LeRoy J. Stephens, St. Louis	Daniel L. Sexton, St. Louis
"	Joseph B. Vacca, St. Louis	James M. Stokes, St. Louis
"	Leo L. Wacker, St. Louis	William Stoneman, III, St. Louis
"	Herbert C. Wiegand, St. Louis	Oliver E. Tjoflat, St. Louis
"	Carol F. Williams, St. Louis	Clarence M. Turner, St. Louis
"	Edward H. Wirthlin, St. Louis	John A. Virant, St. Louis
"	Edwin Wolfgram, St. Louis	Hugh R. Waters, St. Louis
"	Richard W. Yore, St. Louis	
St. Louis County	Falls Hershey, St. Louis	Morris Alex, St. Louis
"	Jack R. Eidelman, St. Louis	Clarence Benage, St. Louis
"	Charles Miller, St. Louis	Wilbur Gearhart, St. Louis
"	Richard Sutter, St. Louis	Glenn Hickey, St. Louis
"	C. Read Boles, St. Louis	John Laird, St. Louis
"	Richard Oglesby, St. Louis	Robert Lund, St. Louis
"	Frederick Peterson, St. Louis	Paul Miles, St. Louis
"	Allen Klippel, St. Louis	Thomas Moon, St. Louis
"	Rudolph Catanzaro, St. Louis	Wilbur Mullarky, St. Louis
"	C. Howe Eller, St. Louis	James Nakada, St. Louis
"	Larry Harwell, St. Louis	Joseph O'Keefe, St. Louis
"	Melvin Schwartz, St. Louis	Argyrios Tsifutis, St. Louis
"	James Sisk, St. Louis	Frank Valach, St. Louis
"	Willard Walker, St. Louis	Roy Walther, St. Louis
"	Miles Whitener, St. Louis	Paul Whitener, St. Louis
Saline	James A. Reid, Marshall	E. Lee McCorkle, Marshall
SEMO		
Stoddard	Richard Comeau, Dexter	Ralph D. Rehm, Bloomfield

<i>County</i>	<i>Delegates</i>	<i>Alternates</i>
New Madrid	Ernie L. Sandidge, New Madrid	Jon P. Downey, New Madrid
Mississippi	Robert L. Frazier, Charleston	Wilbur L. Davis, Charleston
Scott	Max A. Heeb, Sikeston	Frank Tull, Sikeston
South Central		
Wright	Martin Hasek	James Hasek,
	Mountain Grove	Mountain Grove
Texas	Joe Spears, Cabool	W. F. Dreyer, Houston
Howell	C. F. Smith, Willow Springs	M. L. Fowler, West Plains
Oregon	C. W. Cooper, Thayer	A. T. Walker,
		Mammoth Springs, Ark.
Douglas	M. C. Gentry, Ava	
Ozark	R. H. Smith, West Plains	J. N. Wiles, West Plains
Webster	T. M. Macdonnell, Marshfield	Robert J. Bareis, Marshfield
West Central		
Bates	Carter W. Luter, Butler	Arthur Hansen, Butler
Cass	Alfred Eklund, Pleasant Hill	Edward S. Jones,
		Harrisonville
Cedar	Robert L. Magee	William Richter, Stockton
	Eldorado Springs	
St. Clair	Don Giesler, Osceola	Glen H. Reed, Osceola
Vernon	James J. Pascoe, Nevada	Rolla B. Wray, Nevada

COMMERCIAL EXHIBITORS LIST

For the 113th Annual Session

<i>Booth</i>	<i>Exhibitors</i>	<i>Booth</i>	<i>Exhibitors</i>
50	ABBOTT LABORATORIES North Chicago, Ill.	40	HOECHST PHARMACEUTICAL COMPANY Somerville, N. J.
35	AMERICAN MEDICAL FACILITIES CORP. St. Louis	13	HOMEMAKERS—UPJOHN St. Louis
18	AMES COMPANY, DIVISION MILES LABORATORIES Elkhart, Ind.	3	KNOLL PHARMACEUTICAL COMPANY Orange, N. J.
7	APACHE CORPORATION Minneapolis, Minn.	8	LAKESIDE LABORATORIES, INC. Milwaukee, Wis.
26	ASTRA PHARMACEUTICAL PRODUCTS, INC. Worcester, Mass.	46	ELI LILLY AND COMPANY Indianapolis, Ind.
44	AYERST LABORATORIES New York, N. Y.	2	THE MEDICAL PROTECTIVE COMPANY Fort Wayne, Ind.
42	BLUE CROSS—BLUE SHIELD St. Louis	34	MEDICARE PHARMACIES, INC. St. Louis
38	BLUE LINE CHEMICAL COMPANY St. Louis	10	MERCK SHARP & DOHME West Point, Pa.
47	BOCK PHARMACAL COMPANY St. Louis	43	MILLER PHARMACAL COMPANY St. Louis
31	BRISTOL LABORATORIES Sytacuse, N. Y.	15	ORTHO PHARMACEUTICAL CORPORATION Raritan, N. J.
4	CASUALTY INDEMNITY EXCHANGE Denver, Colo.	30	PARKE, DAVIS & COMPANY Detroit, Mich.
37	COCA-COLA USA Chicago, Ill.	27	ROWELL LABORATORIES, INC. Baudette, Minn.
48	COLE PHARMACAL COMPANY, INC. St. Louis	41	SANDOZ PHARMACEUTICALS Hanover, N. J.
28	DAIRY COUNCIL—ST. LOUIS DISTRICT St. Louis	24	W. B. SAUNDERS COMPANY Philadelphia, Pa.
23	DATA SERVICE AGENCY, INC. St. Louis	20	SCHERING CORPORATION Union, N. J.
39	DICTAPHONE CORPORATION Rye, N. Y.	51	G. D. SEARLE & COMPANY Chicago, Ill.
5	THE DOYLE PHARMACEUTICAL COMPANY Minneapolis, Minn.	25	SEVEN-UP BOTTLING COMPANY St. Louis
32	EATON LABORATORIES Norwich, N. Y.	45	STUART PHARMACEUTICALS Division of Atlas Chemical Ind., Inc. Pasadena, Calif.
22	GENERAL BIOLOGICAL CORPORATION St. Louis	6	THE UPJOHN COMPANY Kalamazoo, Mich.
21	GENTEC HOSPITAL SUPPLY COMPANY St. Louis	49	ZIMMER-ERNST ASSOCIATES St. Louis

The Council Reports

Meeting of Dec. 12-13, 1970

Walter T. Gunn, M.D., St. Louis, Chairman, called the meeting to order. Those present were Drs. Gunn; John N. Martin, St. Joseph; Lysle M. Bach, Hannibal; Robert A. Mayer, Clayton; James C. Cope, Columbia; William D. Bradshaw, Clinton; R. A. Chandler, Kansas City; Howard J. McAlhany, Springfield; E. A. Stricker, St. James; E. T. Hansbrough, Poplar Bluff; Joseph L. Fisher, St. Joseph; Gerald L. Miller, Kansas City; John I. Matthews, Jefferson City; Max S. Franklin, St. Louis; Doyle C. McCraw, Bolivar; J. Loren Washburn, Versailles; Hector W. Benoit, Jr., Kansas City; Arthur W. Neilson, St. Louis; William D. Mayer and William C. Allen, Columbia; Robert H. Felix, George E. Thoma, and M. Kenton King, St. Louis; Richardson K. Noback, Kansas City; Henry V. Guhleman, Jr., Jefferson City; John McDonnell, Kansas City; Charles Worley, Sweet Springs; Paul R. Young, Kansas City; Messrs. Humphrey and Schroeder of Eggert-Carroll-Schroeder Agency, Inc.; John W. Noble, Kennett; Hollister Smith, St. Louis; Edgar Mothershead, Clayton; Gary L. Schnedler, Springfield; Allen D. Smith, Kansas City; Edward M. Hirsch, St. Joseph; Ray McIntyre, Tom P. Fox, Bob Carroll and Royal O. Cooper, Staff.

The Chairman requested approval of the minutes of the Council meeting on Oct. 3-4, 1970, calling attention to a correction on page 4, paragraph 7, under the Report of the Committee on Planning, regarding the "mandatory emergency physician call roster in hospitals" which was referred to the Commission on Medical Education and Health Manpower for further study, recommendation and activation. Also, paragraph 8, page 4 and continuing on page 5, regarding "the need for active speakers bureaus in all sections of the state" which should have been referred to the Commission on Public Affairs instead of the Commission on Medical Education and Health Manpower, as reported in paragraph 2 on page 5 of the mimeographed copies.

On motion, duly seconded, the minutes of the October 3, 4, meeting were approved as amended.

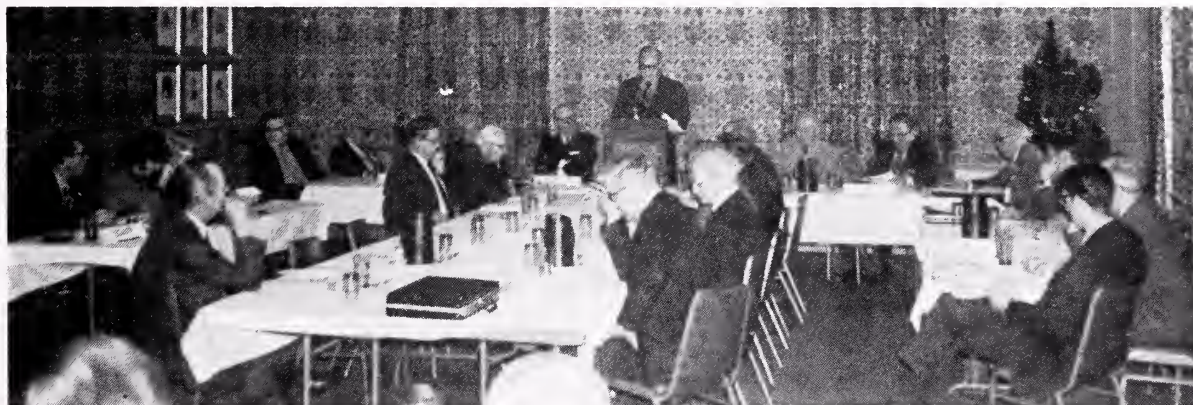
REPORT OF THE EXECUTIVE SECRETARY

Mr. McIntyre stated that an official request had been received from the Woman's Auxiliary to MSMA for \$600 to assist with their 1971 annual meeting expenses. On motion of Dr. Stricker, duly seconded, the official request of the Woman's Auxiliary in the amount of \$600 was approved.

It also was reported that a request had been received from SAMA for continuation of our sustaining membership in that organization in the amount of \$100. On motion, duly seconded, the Council approved this expenditure. Mr. McIntyre mentioned that SAMA is having its annual meeting on May 4-8, 1971 in St. Louis and their Woman's Auxiliary is to meet at the same time. He added that the MSMA Woman's Auxiliary has received a request for funds to help the SAMA Auxiliary with their meeting expenses.

Mr. McIntyre reported that he had received a request which had been sent to Dr. Hansbrough, Councilor of the Tenth District, from the Mineral Area Medical Society seeking to add Bollinger County to that hyphenated county society. It was pointed out that the Council has the authority to grant such hyphenation. After discussion, on motion of Dr. Hansbrough, duly seconded, it was agreed to add Bollinger County to the Mineral Area Medical Society.

The Executive Secretary reported that a number of physicians have requested that the fee schedules developed by the various specialty organizations for use by the Division of Welfare, through the MSMA Council some three years ago as a cut-off figure in processing Medicaid claims, be revised and brought up to date to conform with rising costs. He stated that the Commission on Interspecialty Medicine will meet on January 17 and will discuss this matter. Dr. Fisher proposed that the Council consider whether or not these fee schedules should be released through the Commission to the respective specialty groups to assist each specialty group in making up a



Dr. Walter T. Gunn, Chairman, presided at the MSMA Council meeting in Jefferson City in December. The MSMA Councilors and officers were seated at the head and center tables, MSMA staff members at the left table and county society executive secretaries at the right table.

new cut-off fee schedule, but that no publicity or circulation of these lists be given without Council consent. Mr. McIntyre stated that Chairman Gulick would like to bring this matter before the Interspecialty Commission to see if they recommend revising the schedules and if so, approval of the Council is requested.

After considerable discussion, on motion of Dr. Mayer, it was agreed that the Council authorize the staff to release the fee schedules to the members of the Commission on Interspecialty Medicine on a restructuring basis and amended by Dr. Bradshaw with the request that the fee schedule information be made available to the Board of Trustees of the newly organized Health Care Foundation of Missouri. The motion was duly seconded and carried as amended.

HEALTH CARE FOUNDATION OF MISSOURI

The administrative members of the Health Care Foundation of Missouri completed their election of members to the Board of Directors. The following were elected for the terms indicated: Dr. Benoit had previously been elected to a three-year term on the Board and a one-year term as Chairman; Dr. Gerald Miller—three-year term; Drs. Rae Froelich and Joseph Fisher—two-year terms; and Drs. Charles Gulick and John I. Matthews—one-year terms. Mr. Cooper stated that the first meeting of the Board of Directors will be on Saturday, Dec. 19, 1970.

REPORT OF THE TREASURER

Dr. Franklin gave a brief report on the financial standing of the Association as of Nov. 30, 1970, copies of which were distributed to the Council and officers. He stated that the Association is in good financial condition and would finish the year in the black. On motion, duly seconded, the Treasurer's report was approved.

REPORT OF COMMISSION ON PUBLIC AFFAIRS

Dr. Guhleman, Chairman of the Commission on Public Affairs, called attention to a copy of the program for the 1971 County Medical Society Officers Conference which is scheduled for Saturday afternoon and Sunday morning, Jan. 30-31, 1971 at the Ramada Inn, Jefferson City. He stated that the program for the meeting was formulated by a committee headed by Dr. Richard Bowles of Liberty, who was aided by the staff of MSMA.

Dr. Guhleman also called attention to a proposed orientation program for new members which is tentatively scheduled for Thursday morning, April 15, 1971 in St. Louis, just prior to the opening of the House of Delegates at MSMA 113th Annual Meeting. He stated that the program was prepared at the direction of the Council by a group chaired by Dr. Troy Morgan of Albany. He said that if the Council decides to have an orientation program, the Commission on Public Affairs will accept the responsibility for securing speakers for the program and will make any changes the Council suggests.

Dr. Guhleman reported that a special Ad Hoc Committee had been named to work in the "Medical Aspects of Sports" field. Dr. Donald Spencer of Kansas City was named Chairman of this Ad Hoc Committee. Members of the Committee are Dr. Hansbrough, Poplar Bluff; Dr. Edwin C. Ernst, Jr., St. Louis; Dr. H. Peter Ekern, Mexico; and Dr. David W. Brown, Springfield.

He also reported that the Commission was assigned to study the need for an Association Speakers Bureau and that he had requested the MSMA staff to secure information from other states which have such programs. This will be brought before the full Commission before any action is taken.

Dr. Guhleman expressed his appreciation to the MSMA staff and especially Bob Carroll for his help on these projects.

Dr. Mayer stated that he would like to endorse the orientation program as proposed and complimented the group for the fine program.

On motion, duly seconded, the report of the Commission on Public Affairs was accepted.

IRS PROPOSED ASSESSMENT

Mr. Noble reported on the assessment levied on the MSMA regarding unrelated income from Journal advertising and stated that a protest has been filed with the IRS and a district conference has been requested on the matter. He stated that he thinks the protest is in good form and all of the questions which he considered pertinent to the termination of the matter had been raised and possibly within the next 30 to 60 days, we will have a conference in which all of these matters can be discussed.

REPORT OF THE BUDGET COMMITTEE

Dr. Franklin reported that the Budget Committee met on Friday, December 11 at 4 PM with all members of the Committee present. He said the Association is now spending additional funds for legal and auditor expenses in the IRS matter. He reported that the Budget Committee recommends unanimously that the Planning Committee be charged with making a progressive study of the fiscal needs of the Association and make recommendations for mechanism that will support these fiscal needs. On motion of Dr. Stricker, duly seconded, this was approved.

The Budget Committee also recommended that the Planning Committee study the MSMA and its responsibility to its members in regard to continuing medical education, particularly the financing of such endeavors. On motion, duly seconded, this was approved.

MISSOURI STATE MEDICAL FOUNDATION

Dr. Franklin reported the Board of Trustees of the Missouri State Medical Foundation (Medical Student Loan Program) had requested the Council to approve renewing the \$10.00 per active member and \$5.00 per junior member assessment for the next three years. He stated the Foundation has money to take care of the year 1971, but the House of Delegates will have to determine whether or not the assessment will be renewed for 1972, 1973 and 1974. After discussion, on motion, duly seconded, the Council agreed to submit a recommendation to the House of Delegates that the assessment be renewed for the next three years, 1972, 1973 and 1974.

Mr. McIntyre reported that the Headquarters Office is badly in need of a new addressograph and presented figures on the cost of this new equipment which would amount to approximately \$2,649. It was pointed out that if it were purchased before December 21, an estimated 6% price raise would be saved. On motion of Dr. Franklin, seconded by Dr. Mayer, the Council approved the purchase of the new equipment.

MSMA BUDGET FOR 1971

The following budget for the year 1971 was presented for Council approval:

Salaries	\$118,500.00
Furniture & Fixtures	1,000.00
Office Rent & Lights	7,700.00
General Expense	2,600.00
Office Supplies	3,500.00
MSMF Assessment	36,065.00
Postage	3,500.00
MSMF Expense	3,300.00
Journal Expense	40,000.00
Equipment Rentals & Repairs	2,400.00
Telephone & Telegraph	7,600.00
Pension Expense	21,097.00
Legal & Professional	10,000.00
Taxes-Payroll	3,800.00
Travel Expenses	8,600.00
Meetings & Committee Expense	33,600.00
Annual Session	17,000.00
Re-investment of Reserve Income	5,000.00
Total	\$325,262.00

After discussion and following a short executive session, on motion of Dr. Franklin, duly seconded, the Budget Committee Report was approved as a whole with the above budget for 1971 being adopted.

COUNCILOR DISTRICT REPORTS

Dr. Martin reported on a First Councilor District meeting held in St. Joseph with some 80 persons in attendance. Dr. Fisher and Dr. Noback were guest speakers.

He also reported on some difficulty regarding physician relationship with school principals and coaches in regard to writing excuses for children who should not participate in physical education activities. It was pointed out that the state of Missouri requires that a child cannot graduate from high school without a specified number of quarters of physical education. After further discussion, it was decided that this problem be referred to the Commission on Public Affairs.

Dr. Martin also requested information regarding a breakdown of the number of licensed M.D.'s in the state and the number belonging to the MSMA and the AMA. It was pointed out that such a list is not available at this time. He also requested information regarding bills to be introduced in the coming session of the Legislature which are of special interest to the medical profession, so that proper contacts could be made on the local level. It was pointed out that the MSMA staff would do all in its power to get this information to key personnel on the local level as soon as possible.

Dr. Bach gave no formal report for the Second Councilor District.

Dr. Gunn, Third District, reported that the Annual Meeting and Installation of New Officers of the St. Louis Medical Society will be held on Jan. 5, 1971. He also reported that they had conducted a survey of their membership on long range planning and had received a number of good suggestions on how to improve their society meetings.

Dr. Mayer reported on the Fourth Councilor District meeting which was held on November 20 at Stouffer's Inn in St. Louis with an attendance of 140 to 150 persons. Dr. Egeberg of HEW and Dr. Fisher were the guest speakers. Representatives from all of the Fourth



Missouri's medical schools were well represented at the Council meeting. (Left to right) Drs. Robert H. Felix, Dean, and George E. Thoma, Assistant Vice-President for Medical Center, St. Louis University; M. Kenton King, Dean, Washington University; William C. Allen, Assistant Medical Director, University of Missouri-Columbia; Richardson K. Noback, Dean, University of Missouri-Kansas City; William D. Mayer, Dean, University of Missouri-Columbia.

Councilor District societies were present, as well as representatives from Blue Shield and various hospitals in the area. Dr. Mayer announced that St. Louis County Medical Society will hold its annual Installation Dinner on Jan. 22, 1971.

Dr. Mayer then presented a resolution, which was passed by the St. Louis County Medical Society Council, proposing elimination of junior dues and assessments of the Missouri State Medical Association. It was pointed out that this would require a change in the MSMA By-laws and would have to be passed by the House of Delegates. It was suggested that this be presented in the usual manner to the next session of the House of Delegates in April, 1971.

Dr. Cope, Fifth District, reported that he had spoken at a recent meeting of pre-med students and had spent a very delightful morning. He also mentioned a project in connection with the Boone County Medical Society and the Welcome Wagon group who put out a booklet which gives information on how to find a physician, how to get emergency care, ambulance, etc. He said the Chamber of Commerce agreed to take calls and help in this respect.

Dr. Bradshaw reported that a Sixth Councilor District meeting will be held on Jan. 13, 1971 at Warrensburg and invited all to attend.

Dr. Chandler, Seventh District, reported that Blue Cross and Blue Shield plans in Kansas City and St. Louis are not under the supervision of the State Insurance Department, since they are public service institutions, and not insurance, and should not be subjected to a proposed state premium tax, although some state supervision is logical. He also reported that recently a hearing was held before the State Director of Insurance on this issue and the Blues were represented by their respective legal counsels, but no report of the outcome has been released to date. Dr. Miller reported that the Kansas City plans had requested reports from other states which are under State Insurance Commissioners to find out what is going on and this information should be available in about two weeks.

Dr. Miller supported Dr. Chandler in his remarks concerning the Blues and the State Insurance Department. After further discussion, Dr. Gunn referred this problem to the Legislative Committee for study and suggested that representatives of the Blue Plans appear before the Committee.

Dr. Chandler further reported that under the Uniform Anatomical Gift Act, Jackson County has come up with a card that can be carried in one's pocket and is legal. Copies of the card were distributed for information. It was suggested that this could be done on a county society level and cards should be made available in all doctors' offices in order to secure donors.

Dr. McAlhany, Eighth District, reported that Greene County Medical Society had sponsored a Health Careers Program at the same time the Annual State Teachers was meeting. He also reported on their Third Annual Orientation program which was held recently.

Dr. Stricker, Ninth District, reported that the county societies in his district are meeting regularly with good programs.

Dr. Hansbrough, Tenth District, stated he had attended the meeting of the Southeast Missouri Cancer Conference in Cape Girardeau which was an excellent meeting, and that plans are to have the meeting in Poplar Bluff next year.

REPORT OF THE PRESIDENT

Dr. Fisher thanked Dr. Mayer for the hospitality extended to Mrs. Fisher and him when they attended the Fourth Councilor District meeting in St. Louis and recommended that the Councilor District meetings should be continued next year. He also stated that he had attended the Grand River Christmas Party on December 10, which was well attended, as usual.

Dr. Fisher said that there was one item that had been discussed by the Council several times regarding interns and residents serving within our state. He said some effort should be made to organize this group into a Society and a mechanism should be provided whereby they can elect delegates to the Annual Session of MSMA and take part in the House of Delegates and its deliberations. In this manner, we would have better communications between these physicians, so they would be made aware of the needs in our state and perhaps be induced to remain in practice in Missouri.

Dr. Fisher stated that the MSMA should continue to work toward this goal in the future since the younger element in the medical profession today will be the leaders later on. They need to take a more active position and play a more important role in organized medicine.

President Fisher also mentioned that legislation is needed in Missouri to protect those serving on Review Committees. He stated that with Peer Review coming and the Health Care Foundation becoming functional, we will run into problems and should be in position to take care of them.

Dr. Fisher stated that the MSMA should promote a suitable means for mediating hospital-physician disputes.

He called attention to a communication received from Dr. Jordan Kelling regarding the Missouri Chapter of the American Association of Medical Assistants, stating they would like to avail themselves of the space in *MISSOURI MEDICINE* which had been offered to them some time ago. Dr. Fisher asked the Council to instruct the staff that when communications are received from this group and after careful screening, the material be accepted for publication in *MISSOURI MEDICINE*. On motion, duly seconded, it was agreed to accept this material as directed by the Council.

REPORT OF MEDICAL SCHOOL DEANS

Dr. William Mayer said that he would like to give a follow-up of the report made at the previous Council Meeting regarding the budgetary problems of the University of Missouri-Columbia Medical Center. He stated

(Continued on page 201)

Brief Summary of Prescribing Information—9-9/22/69. For complete information consult Official Package Circular.

Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.

Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)

Usual Dose: 1 tablet b.i.d.

Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®
hydroflumethiazide, 50 mg./reserpine,
0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL

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Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin[®]

hydroflumethiazide, 50 mg./reserpine,
0.125 mg. protoveratrine A, 0.2 mg.





WASHINGTON

President Nixon promised that every effort will be made to keep bureaucracy at a minimum in connection with his new overall national health program even before he disclosed its details.

"... We do not want the doctors and those in the medical profession to be smothered under a whole, huge bureaucracy and under a great pile of government forms," he said in a speech at the 20th annual meeting of the American College of Cardiology prior to his acceptance of the college's 1971 Humanitarian Award.

Nixon said he recognized that there is no program for medical care that would be good for the patient unless it is supported by physicians and has the cooperation of the medical profession.

"So we want your advice, we want your cooperation, we want to work together with you in developing a program that will do what is needed to be done and do the best for our patients, your patients, but also that will enable you to meet your responsibilities as unhampered as is possible by federal bureaucracy, red tape and the like," he said.

"That is our objective and I will simply say . . . that as this debate goes on through the year that I know that we will have your cooperation.

"I know the dedicated men and women that are in this profession. And I can assure you that we will listen. We want your advice because, as I said in the state of the union message, we have one great goal."

In the state of the union message, the president said:

"As a fourth great goal, I will offer a far-reaching set of proposals for improving America's health care and making it available more fairly to more people.

"I will propose:

"A program to insure that no American family will be prevented from obtaining basic medical care by inability to pay.

"I will propose a major increase in and redirection of aid to medical schools, to greatly increase the number of doctors and other health personnel.

"Incentives to improve the delivery of health services, to get more medical care resources into those areas that have not been adequately served, to make greater use of medical assistants and to slow the alarming rise in the costs of medical care.

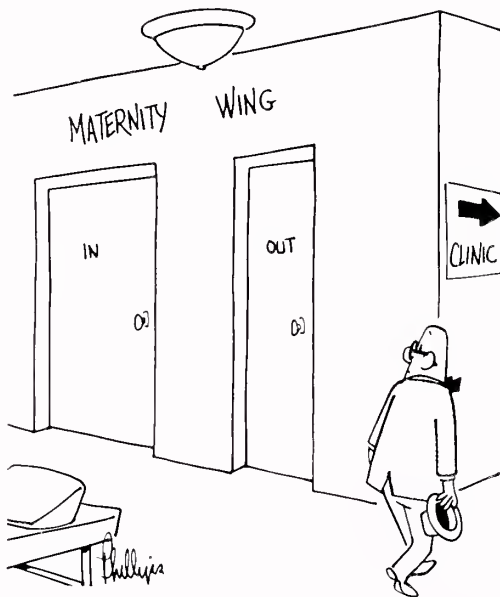
"New programs to encourage better preventive medicine, by attacking the causes of disease and injury, and by providing incentives to doctors to keep people well rather than just to treat them when they are sick.

"I will also ask for an appropriation of an extra \$100-million to launch an intensive campaign to find a cure for cancer, and I will ask later for whatever additional funds can effectively be used. The time has come in America when the same kind of concentrated effort that split the atom and took man to the moon should be turned toward conquering this dread disease. Let us make a total national commitment to achieve this goal.

"America has long been the wealthiest nation in the world. Now it is time we became the healthiest nation in the world."

In his budget message, Nixon said he later would send to Congress a message "that will set out a national health strategy for the seventies and propose significant changes in the federal role in the nation's system of health care."

"This strategy will seek to expand preventive care, to train more doctors and other health personnel, to achieve greater equity and efficiency in the delivery of health services," he said. "It will include a new health insurance program for all low-income families with children."





(Left to right) Dr. W. D. Bradshaw, Sixth District Councilor, greets MSMA President Joseph L. Fisher and Dr. Hector W. Benoit, Jr., featured speaker at the Sixth District meeting.



Dr. T. Reed Maxson and Mrs. Maxson (center) welcome MSMA Councilor W. D. Bradshaw (left) and Mrs. Bradshaw (right) to the meeting in Warrensburg.

Sixth District Doctors Meet in Warrensburg

Approximately 50 area physicians and their wives attended the annual meeting of the Sixth Councilor District of the Missouri State Medical Association on January 13 at the Holiday Inn in Warrensburg.

Dr. Hector W. Benoit, Jr. of Kansas City, guest speaker for the evening, discussed "Peer Review" as sponsored by the Health Care Foundation of Missouri. Doctor Benoit is a Delegate to the American Medical Association and a Past-President of the MSMA.

In his presentation, Doctor Benoit said the "Peer Review" refers to efforts by physicians to attempt to control the high cost and improve the quality of medical care. He said that this effort

should be reflected in increased benefits to the public and the medical profession, as well. He also stated that the Health Care Foundation of Missouri will help to prevent the abuse of government medical programs by medical recipients.

Guests at the meeting included Dr. Joseph L. Fisher, St. Joseph, President, and Dr. Gerald Miller, Kansas City, President-Elect of the MSMA.

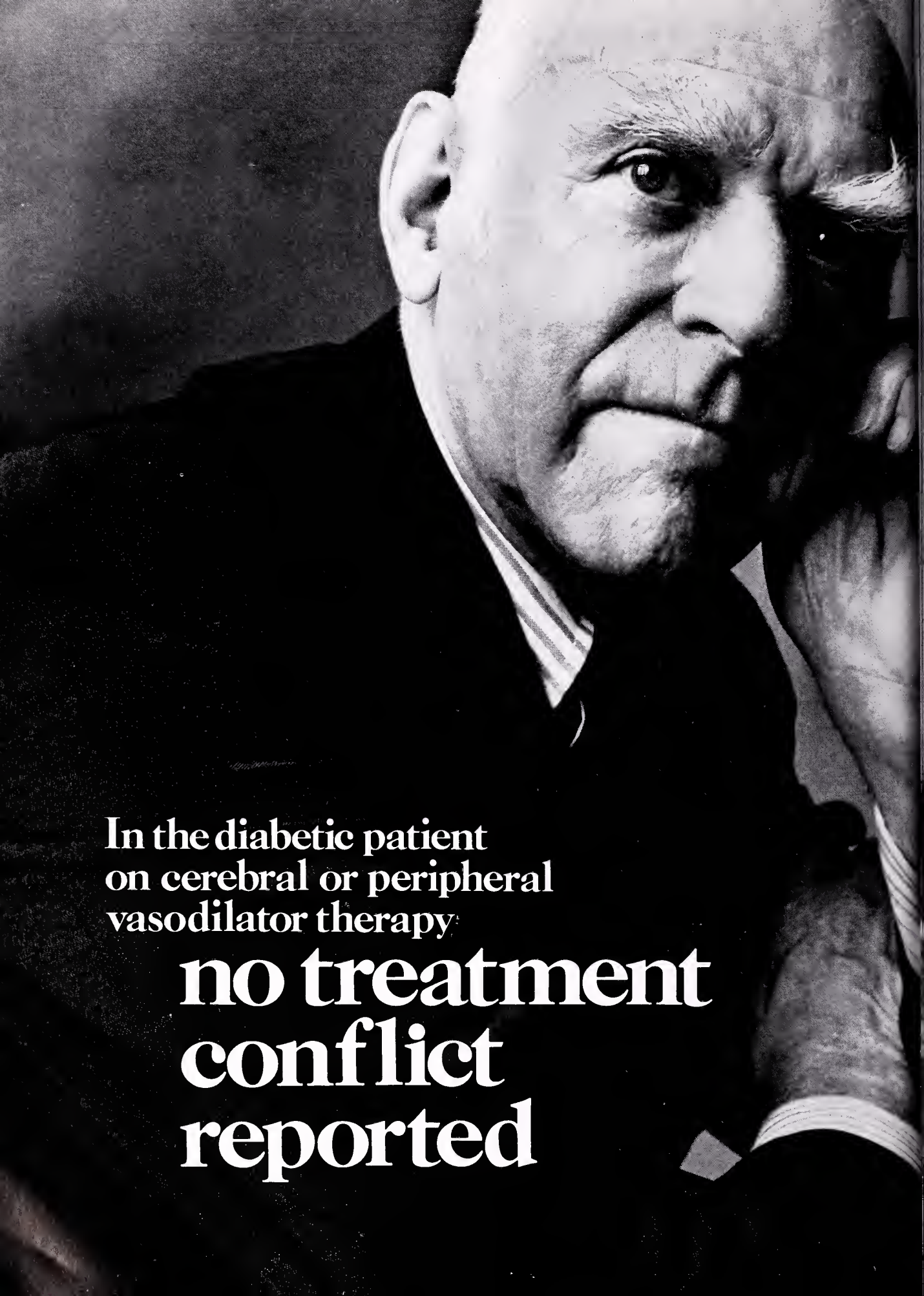
Dr. W. D. Bradshaw, Clinton, is Councilor for the Sixth District. Dr. A. L. Folkner, Warrensburg, is President and Dr. T. Reed Maxson, Warrensburg, is President-Elect of the Johnson County Medical Society.



President Joseph L. Fisher (left) takes the opportunity to discuss Association affairs with Mr. Ray McIntyre of Jefferson City, Executive Secretary of the Missouri State Medical Association.



Dr. Hector W. Benoit, Jr. (right), answered many questions after the dinner meeting. He explains a point to Dr. Richard H. King of Clinton (left). Doctor Maxson is standing behind Doctor Benoit.



In the diabetic patient
on cerebral or peripheral
vasodilator therapy:

**no treatment
conflict
reported**

VASODILAN[®]

(ISOXSUPRINE HCl)
the compatible vasodilator

- no interference with diabetic control
...does not alter carbohydrate metabolism.¹
- conflicts have not been reported with diuretics, corticosteroids, antihypertensives or miotics.
- complications in the treatment of coronary insufficiency, hypertension, peptic ulcer, glaucoma and liver disease have not been reported.

In fact, there are no known contraindications in recommended oral doses other than it should not be given in the presence of frank arterial bleeding or immediately postpartum.

Although not all clinicians agree on the value of vasodilators in vascular disease, several investigators²⁻⁵ have reported favorably on the effects of isoxsuprine. Effects have been demonstrated both by objective measurement^{3,5} and observation of clinical improvement.^{2,4}

Indications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebotic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODILAN tablets, isoxsuprine HCl 10 mg, and 20 mg. **Dosage:** Oral—10 to 20 mg. t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. Complete details available in product brochure from Mead Johnson Laboratories. **References:** (1) Samuels, S. S., and Shaftel, H. E.: J. Indiana Med. Ass. 54:1021-1023 (July) 1961. (2) Clarkson, I. S., and LePere, D. M.: Angiology 11:190-192 (June) 1960. (3) Horton, G. E., and Johnson, P. C., Jr.: Angiology 15:70-74 (Feb.) 1964. (4) Dhrymiotis, A. D., and Whittier, J. R.: Curr. Ther. Res. 4:124-128 (April) 1962. (5) Whittier, J. R.: Angiology 15:82-87 (Feb.) 1964.

Mead Johnson
LABORATORIES

medical melange

Notes of interest from Here

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and There

Dr. James T. Brown, Springfield, was elected the new Potentate of the 4,100-member Abdou Ben Adhem Temple of the Shrine in Springfield in January. More than 600 Shriners from 33 counties in Southeast Missouri attended the annual meeting. Long active in civic and professional affairs in Springfield and the Ozarks, Doctor Brown was the 1967 recipient of Drury College's Outstanding Alumni Award. He is a member of the Board of Trustees of the College, a member of the Missouri State Board of Registration of the Healing Arts and serves on the Board of Directors of Springfield's Empire Bank. A former chief of the surgical staff at St. John's Hospital, Doctor Brown is the founder of the nationally-known **Singing Doctors** group and a past-president of the Ozark Regional Heart Association.

A commemorative postage stamp bearing the message, "Giving Blood Saves Lives," will be issued in March. Motivated by **Dr. John A. Shively**, a member of the faculty at the University of Missouri Medical Center, the stamp was supported by the American Medical Association and the Red Cross.

Dr. John N. Martin, Councilor for the MSMA First District, was elected president of the Family Guidance Center in St. Joseph on January 28. Financed partly by United Funds, the center has been in operation in St. Joseph for the past eight years and is open to anyone in the community wishing aid in family problems.

Dr. George X. Trimble, former medical director of the Catholic Hospitals Medical Education Foundation of Kansas City, has been appointed medical director of Jackson County Public Hospital. Doctor Trimble also is medical director of the Missouri Regional Medical Program Fact Bank at the University of Missouri-Columbia and commanding officer of Medical Service Flight 438 at Richards-Gebaur Air Force Base.

Dr. Bernard L. Murphy has retired after 37 years of practice in Hannibal. Doctor Murphy received his M.D. degree from the St. Louis School of Medicine in 1930. He served as head of the Surgery and Orthopedics Department at St. Elizabeth's Hospital and as head of the Orthopedics Department at Levering Hospital until he resigned both recently.

Dr. Julian A. Ossman, Jefferson City, past-president of St. Mary's Hospital medical staff, was presented a special award for more than 30 years' service in the hospital. **Dr. J. S. Sanders** also was honored by the Sisters of St. Mary's as outstanding physician of the year. Doctor Sanders has served on numerous medical committees and was chief-of-staff last year.

Dr. James P. Murphy, Clayton, and **Dr. Wilson J. Ferguson**, Sikeston, have been reappointed as members of the Missouri Regional Medical Program Advisory Council by Gov. Warren E. Hearnes. The 12-member council is charged with developing statewide plans for coordination of health services.

Dr. Robert W. Kieber, St. Joseph, was honored recently during the 25th anniversary ceremonies for graduates of Creighton University in Omaha, Neb. Doctor Kieber and other members of the class of 1945 received special citations at the annual alumni banquet held in conjunction with the Omaha Midwest Clinical Society meeting.

Mr. William Bartleson, retired executive director of the Jackson County Medical Society, and **Mr. Nathan Stark**, chairman of the board of the Kansas City General Hospital, were honored with the Lay Award for their contributions to medicine at the annual dinner meeting of the Jackson County Medical Society in Kansas City in January. Only 11 of the awards have been presented since the initiation of the awards in 1944. **Dr. Sidney Rubin**, new president of the Society, was the dinner speaker.

Dr. Leroy J. Stephens, Webster Groves, was chosen as State Knight of the Month in January by the State Fraternal Activities Chairman and the Committee of Knights of Columbus. He is an associate professor at St. Louis University and on the staffs of Cardinal Glennon Hospital and other affiliated hospitals. Doctor Stephens also serves as school physician in the St. Louis Public Schools several days each week.

Dr. Martin Hart has been elected chief-of-staff at Memorial Hospital in Salem. Also elected were **Dr. J. R. Burnett**, vice chief-of-staff and **Dr. Roy Mitchell**, secretary. Doctor Hart succeeds **Dr. J. D. McLeod**.—**Dr. Patrick C. Hogan** has been reelected to a one-year term as president of the Alexian Brothers Hospital medical staff in St. Louis. Also reelected were **Dr. Andrew Luh**, vice-president and **Dr. Porfirio M. Tionson**, secretary-treasurer.

Dr. George W. Dent, Jr., has joined the Department of Obstetrics and Gynecology at Medical Arts Clinic in Farmington where he will be associated with **Drs. F. Richard Crouch** and **Juan Cancelada**. He also is a member of the surgical staff at the Farmington Community Hospital. For the past three years, Doctor Dent has been in the U. S. Army as obstetrician and gynecologist at Fifth General Hospital, Bad Canstatt, West Germany.

Dr. Wallace Smith is the new president of the medical staff of the Independence Sanitarium and Hospital. He succeeds **Dr. Robert S. Mosser**. **Dr. Harry S. Jonas** is president-elect of the hospital staff and **Dr. Milo M. Farnham** is secretary-treasurer.

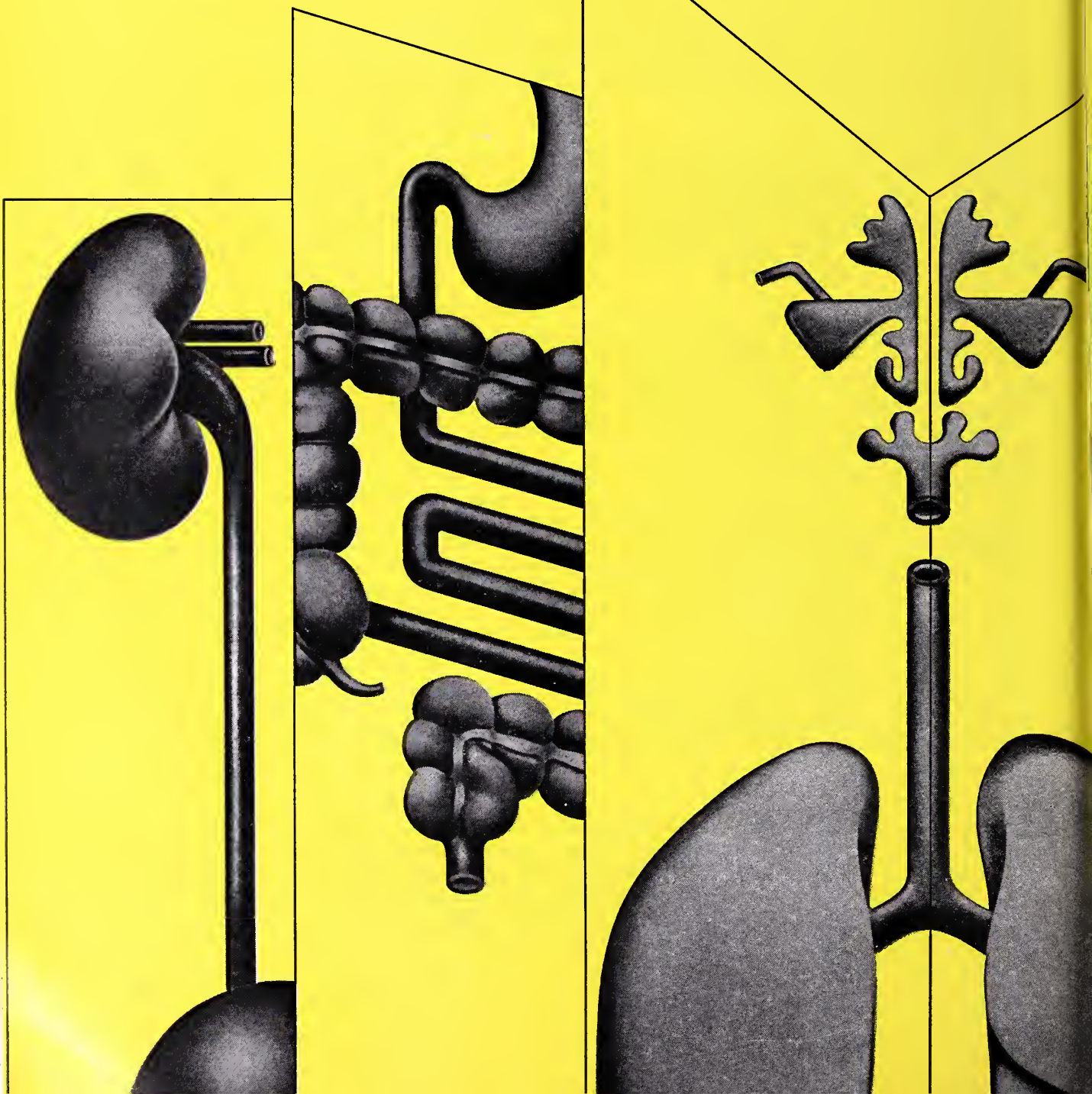
Dr. O. H. Damron was named Citizen of the Month by the Warrensburg Chamber of Commerce recently. Doctor Damron, with **Dr. R. Lee Cooper** and the late **Dr. R. F. McKinney**, established the Warrensburg Clinic in 1941. It grew to become the Warrensburg Medical Center. He also was instrumental in establishing the Johnson County Memorial Hospital.

Tract Record.

A record of clinical efficacy in treating bacterial infections of the respiratory, genitourinary and gastrointestinal tracts caused by susceptible strains of pneumococci, H.influenzae, staphylococci, streptococci, Klebsiellae, E.coli, Enterobacter, Shigella.

A record of years of dependable broad-spectrum activity.

A record of high urine and serum antibiotic levels
all with a 500mg. potency, b.i.d. convenience and low
prescription cost.



Tetrex[®] bidCAPS[®] (500mg. tetracycline phosphate complex)

For complete information consult
Official Package Circular.
(3) 4/2/70

Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. In staphylococcal infections, indicated surgical procedures should be performed.

Contraindications: Hypersensitivity to tetracyclines.

Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used and serum estimations may be necessary during prolonged therapy. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).

Precautions: Mycotic or bacterial superinfections may occur. Infants may develop increased intracranial pressure with bulging fontanels. Cases of gonorrhea with a suspected primary lesion of syphilis should have darkfield examinations before receiving treatment. In all other cases where concomitant syphilis is suspected, monthly serological tests should be performed for a minimum of 4 months.

Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.

Usual Adult Dose: One Gm./day in 2 or 4 equally divided doses. Continue therapy for ten days in Group A beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

Supplied: Capsules—250 mg. in bottles of 16 and 100. bidCAPS—500 mg. in bottles of 16 and 50.

A.H.F.S. Category 8:12

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York 13201

Missouri Allergists Organize New State Association

The Missouri State Allergy Association, Inc., a nonprofit corporation chartered in the state of Missouri, held its founding meeting on Jan. 16, 1971.

Officers of the Association are Drs. James W. Willoughby, Kansas City, president; William T. K. Bryan, St. Louis, president-elect; and Stanley Goldman, Kansas City, secretary-treasurer.

Primary objectives of the new organization are dedication to more efficient delivery of allergy health care in the state of Missouri and establishment of clinical allergy teaching programs in Missouri's medical schools.

The Missouri State Allergy Association has been approved by the Council of the Missouri State Medical Association and representatives will be appointed to serve on the MSMA Commission on Interspecialty Medicine.

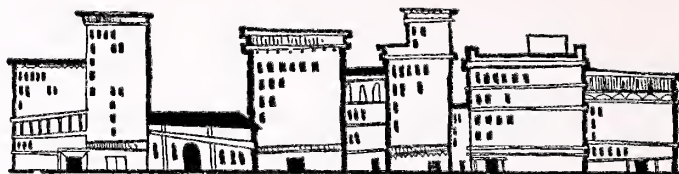
Mrs. Carolyn Thomas is executive secretary of the Association at Suite 1505, Traders National Bank Building, 1125 Grand Ave., Kansas City, Mo. 64106.

The annual meeting of the Missouri State Allergy Association will be held on April 16, 1971 during the 113th Annual Session of the Missouri State Medical Association.



Officers of the Missouri State Allergy Association, which was founded on Jan. 16, 1971, are (left to right, front row), Drs. James W. Willoughby, president; William T. K. Bryan, president-elect; Stanley Goldman, secretary-treasurer; (second row), Charles E. Nickson, Credentials Committee; Clarence C. Cohrs and Jean A. Chapman, members of the Board; and Donald V. Youll, Credentials Committee.

From the Medical Schools



UNIVERSITY OF MISSOURI

Dr. John F. Sulzbach, who was appointed a professor on the faculty of the University of Missouri-Columbia in July, 1969, has been named assistant chairman of the Department of Radiology in the School of Medicine.

Doctor Sulzbach's principal responsibilities are now concerned with correlating clinical sections of the Radiology Department and assisting Dr. Gwilym S. Lodwick, department chairman, with administrative duties. He formerly headed the Section of Diagnostic Radiology.

A graduate of Marquette University School of Medicine, Milwaukee, in 1941, Doctor Sulzbach interned in hospitals affiliated with St. Louis University School of Medicine and served a three-year residency in radiology at the University of Iowa. He was in private practice in Burlington, Ia. and consulting diagnostic radiologist at several Iowa hospitals for 20 years prior to entering teaching at the Missouri School of Medicine.

ST. LOUIS UNIVERSITY

Dr. Ralph L. Biddy, a member of the St. Louis University School of Medicine faculty, has been named chief-of-staff of the City's two recently consolidated Veterans Administration Hospitals and has been appointed assistant dean for Veterans Administration affairs at the School of Medicine.

The appointment was announced jointly on January 25 by Mr. David Anton, director of the Veterans Administration Hospital, and Drs. M. Kenton King and Robert H. Felix, deans of the Washington University and St. Louis University Schools of Medicine.

The St. Louis Veterans Administration Hospital (Cochran and Jefferson Barracks Divisions), a 1,200 bed hospital, is affiliated with both Medical Schools in areas of professional services, teaching and research.

Doctor Biddy is a 1958 alumnus of St. Louis University.

Dr. Robert H. Felix, dean, School of Medicine, was named an honor member of the St. Louis Medical Society on January 5. He received

a citation awarded at the direction of the Council to active members of the Society who have rendered distinguished service to medicine or the community. Doctor Felix will enjoy all the privileges of active membership in the Society and will be exempt from paying dues. Dr. Hubert Ritter made the presentation.

*

Rev. James C. Sunderland, S.J., has been appointed head chaplain at the St. Louis University Hospitals. Father Sunderland is formerly associate chaplain at the Hospitals. Rev. Richard E. Connolly, S.J., S.T.D., has been named chaplain emeritus. A native of Denver, Father Sunderland received the B.A. and M.A. degrees from St. Louis University. He will serve as head chaplain for both Firmin Desloge Hospital and David P. Wohl Memorial Mental Health Institute.

*

Dr. J. Eugene Lewis, clinical professor of surgery, took office as president of the St. Louis Surgical Society on January 13. He is chief of clinical surgery at Cardinal Glennon Memorial Hospital for Children and is director of the Birth Defect Center at the Hospital. He served as treasurer for the St. Louis Surgical Society for three years.

*

Dr. Edward T. Auer, Samuel W. Fordyce professor and chairman, Department of Neurology and Psychiatry, was invited to deliver a paper before the 38th annual meeting of the National Association of Private Psychiatric Hospitals, which met at Key Biscayne, Fla. The paper was titled "A Second Look at the General Hospital Psychiatric Unit."

*

Dr. Yee S. Kim, associate professor of pharmacology at the School of Medicine, has been awarded a three-year research grant of \$93,404 from the National Institute of Arthritis and Metabolic Diseases. The present grant is a renewal of support for the research work which has been carried out during the past few years under Doctor Kim's direction. He and his staff are investigating the effect of hormone on the metabolism of proteins in mammalian systems

in order to clarify the action mechanism of steroid hormone at the molecular level and to clarify the biochemical control mechanisms.

WASHINGTON UNIVERSITY

Dr. Joseph H. Ogura of Washington University School of Medicine is one of ten medical educators and researchers who have received 1971 Distinguished Achievement Awards from *Modern Medicine*.

Doctor Ogura, professor and head of the University's Department of Otolaryngology, was

among nearly 250 men and women nominated for the prestigious awards, which have been given annually since 1934. He is cited for his refinement of laryngeal cancer surgery to preserve swallowing and speech functions. While adaptation for man remains some time off, according to *Modern Medicine*, he also has succeeded in transplanting the larynx in dogs.

Doctor Ogura is attending otolaryngologist at Barnes, Children's and McMillan hospitals in St. Louis and consultant otolaryngologist at Jewish, Veterans Administration and St. Louis County hospitals.

American Academy of Pediatrics to Hold National Meeting in St. Louis

Members of the Missouri State Medical Association have been invited to attend the annual spring session of the American Academy of Pediatrics at the Chase-Park Plaza Hotel in St. Louis on April 19-21, immediately following the Annual Session of the MSMA.

More than 2,000 persons, including pediatricians, other physicians, their families and guests are expected to attend the meeting.

Deviant voice as a symptom of physical and emotional disorders in children, the pediatrician's role in ecology, intensive care units for high risk infants, concepts and relationship to the community and pediatric evaluation and management of learning and behavioral disorders (including drug therapy) are among the subjects scheduled to be presented.

The meeting also will feature approximately 90 scientific and technical exhibits, as well as informative round-table discussions on learning disorders, practical evaluation, allergy, neonatology, radiology, hematology and neurology. Other round table topics to be presented include immunology, psychosocial problems of adolescence, gastroenterology, fluid and electrolytes and pediatric ophthalmology: genetics, strabismus and neuro-ophthalmology.

An allied health manpower conference entitled, "Who Will Take Care of Tomorrow's Children?" is scheduled for 9 AM to 5 PM on April 18. The program will include presentations by practitioners and consumers and will feature demonstrations of various health care

delivery models in the public and private sectors.

A Conference on Dermatologic Problems in Adolescence also will be presented on Sunday by the AMA Committee on Cutaneous Health and Cosmetics.

Advance registrations must be received before April 5. For further information, write to American Academy of Pediatrics, P.O. Box 1034, Evanston, Ill. 60204.

Missouri Surgeons to Meet At Tan-Tar-A in May

Tan-Tar-A, Osage Beach, will be the site of the Annual Meeting of the Missouri Chapter of the American College of Surgeons on May 7-9.

Topics for discussion will include ophthalmology, neuro-surgery, orthopedics, urological surgery, thoracic surgery and general surgery. Dr. Alton Ochsner will be the guest luncheon speaker on Sunday, May 9.

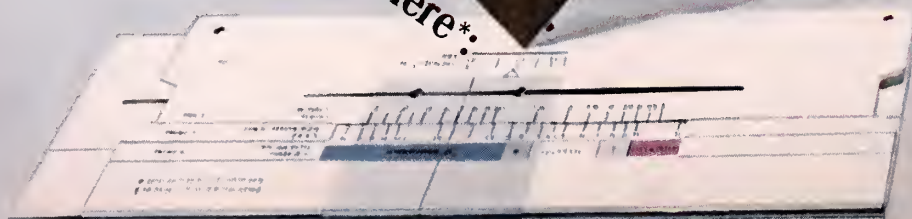
The professional program will be open to all members of the medical profession. To attend, physicians should make reservations for the nights of May 7 and 8. The reservations manager at Tan-Tar-A will accept reservations for a longer period, if made well in advance.

Reservations for both family and guests of the members of the Chapter will be welcome at this time. Informal attire is planned for all meetings.

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Euthroid® (liotrix) puts your patient here*.



*in the euthyroid zone
of the new Free
Thyroxine Index** with
full replacement dosage.

Euthroid (liotrix) yields reliable, easily interpreted test values

Because Euthroid incorporates both active fractions of endogenous thyroid— T_4 and T_3 —it overcomes the need for special interpretation of thyroid function test values.

Moreover, whatever the therapy used, ordinary tests can be thrown off by such factors as abnormal thyroid-binding protein levels, oral contraceptive use and pregnancy. A new method of assessment—the Free Thyroxine Index (FTI)**—helps eliminate these errors. By relating measurements of total and protein-bound T_4 , the FTI indicates your patient's status precisely. And with Euthroid, the precision of your diagnosis is matched by the precision of your therapy.

Closest in clinical effect to human endogenous thyroid

Euthroid provides both T_4 and T_3 in the optimum oral ratio of 4:1 by weight and in proper mcg amounts, closely simulating endogenous thyroid in clinical effect. Dose response can be assessed unequivocally through use of the FTI—and because we want you to put Euthroid to the test with this most rigorous of tests, we offer you an aid to easier determination:

The Euthroidex™ calculator— for the “new math” of thyroid laboratory tests

No longer does FTI determination require you to perform lengthy mathematical exercises. With the Euthroidex calculator—another first from Warner-Chilcott—you compute it easily... accurately... almost instantly. Send for yours now.

In thyroid therapy, Euthroid offers you the calculated success—and the calculator to go with it.

the first synthetic to replace both active fractions of endogenous thyroid

Euthroid® (liotrix)

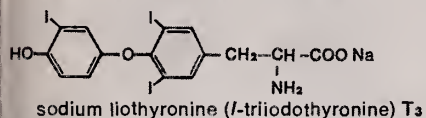
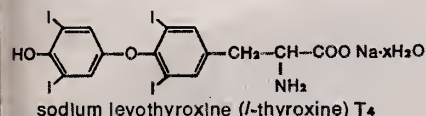
sodium levothyroxine (T_4)
sodium liothyronine (T_3)

*Clark, F., and Horn, D. B.: Assessment of thyroid function by the combined use of the serum protein-bound iodine and resin uptake of ^{131}I -triiodothyronine, J. Clin. Endocrinol. 25:39 (Jan.) 1965.

Euthroid® (liotrix)

Caution: Federal law prohibits dispensing without prescription.

Euthroid is synthetic microcrystalline sodium levothyroxine (T_4) USP and synthetic microcrystalline sodium liothyronine (T_3) USP combined in a constant 4:1 ratio.



Actions: Euthroid provides replacement therapy for the thyroactive material normally supplied by the human thyroid. The normal thyroid gland produces and stores thyroglobulin, the active components of which are two metabolically active hormones: l-thyroxine and liothyronine. Euthroid (liotrix) provides a combination of these hormones in purified, synthetic form, supplied in a constant 4:1 ratio in order to simulate as closely as possible the physiologic and metabolic effects of normal endogenous thyroid secretions.

In contrast with the individual synthetic, metabolically active hormones, Euthroid will usually produce normal results for PBI, T_4 , and other thyroid function tests—consistent with clinical progress—when persons with endogenous thyroid deficiencies are made euthyroid. Sodium liothyronine (T_3) acts more rapidly and for a shorter period of time than preparations of biological origin. Customarily, its use as a single agent produces inappropriately decreased PBI values. Sodium levothyroxine (T_4), on the other hand, is more tightly bound by plasma protein fractions and is somewhat slower acting than sodium liothyronine (T_3); its use as a single agent tends to produce inappropriately elevated PBI values. Euthroid, with its unvarying 4:1 ratio of T_4 / T_3 , permits interpretation of appropriate laboratory tests consistent with the total clinical status of the patient.

Indications: Euthroid (liotrix) provides thyroid replacement therapy in all conditions of inadequate production of thyroid hormones,

namely:

- 1) Hypothyroidism, including cretinism and myxedema.
- 2) Simple (nontoxic) goiter.
- 3) Subacute or chronic thyroiditis including Hashimoto's disease.
- 4) Prevention of goiter in hyperthyroid patients undergoing treatment with thiouracil derivatives.
- 5) Usage in patients who may manifest intolerance to thyroid products of animal origin.

Contraindications: Acute myocardial infarction, adrenal insufficiency, hypersensitivity to any component of this drug.

Warnings: Liotrix should not be used in the presence of cardiovascular disease unless thyroid replacement therapy is clearly indicated. If the latter exists, low doses should be instituted (Euthroid-1/2 or Euthroid-1) and increased by the same amount in increments at 2-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out and adrenal deficiency due to hypopituitarism corrected before liotrix therapy is started.

If hypothyroidism and adrenal insufficiency exist concomitantly, cortisone or similar steroids should be given at dose levels sufficient to correct the adrenal insufficiency before attempting replacement therapy with thyroid hormones.

Likewise, the possibility of alterations in the prothrombin time must be considered and closely monitored in patients on anticoagulant therapy.

Myxedematous patients are very sensitive to thyroid hormones, and dosage should be started at a very low level and increased gradually.

Precautions: Hypothyroid patients are especially sensitive to thyroid preparations, and those with severe hypothyroidism may be unusually so.

Initiation of thyroid replacement therapy in patients with diabetes must be carefully monitored because of potential fluctuation in daily insulin or oral hypoglycemic requirements.

As with all thyroid preparations, this drug will alter the results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage of thyroid preparations can produce signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Initial dosage should be low and gradually increased at 2-week intervals until the desired clinical response is obtained.

Laboratory criteria of euthyroidism include a PBI of 3.5 to 8 mcg; T_4 , T_3 , and BEI tests are useful.

For most patients, a single daily dose of Euthroid-1, -2, or -3 will maintain euthyroidism. Transfer of a patient from a maintenance dose of another thyroid preparation to Euthroid can usually be effected smoothly. See table for initiating therapy or converting from other thyroid preparations.

Euthroid (liotrix)	Approximate Equivalents		
	Natural	Synthetic	
Tablet	Thyroid T_4 */ T_3 ** mcg	T_4 *	T_3 **
Euthroid-1/2 pale orange	(30/7.5)	1/2 grain .05 mg	12.5 mcg
Euthroid-1 light brown	(60/15)	1 grain .1 mg	25.0 mcg
Euthroid-2 violet	(120/30)	2 grains .2 mg	50.0 mcg
Euthroid-3 gray	(180/45)	3 grains .3 mg	75.0 mcg

* T_4 =sodium levothyroxine (l-thyroxine)

** T_3 =sodium liothyronine (l-triiodothyronine)

Dosage for cretinism or severe hypothyroidism in children is the same as for adults with myxedema. Eventual maintenance dosage in the growing child may be higher than in the adult.

Overdosage: Symptoms—Headache, instability, nervousness, sweating, tachycardia, and unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm; chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

Treatment—Shock—Supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.

Supplied: Square W/C monogrammed tablets of four potencies, each identified by a different color (see table); bottles of 100 and 1000.

E-GP-11-40



WARNER-CHILCOTT Morris Plains, N.J. 07950

To request your Euthroidex™ calculator (with booklet explaining its use and rationale for the FTI), just write "Euthroidex" on your imprinted card, prescription blank or stationery, and mail to Warner-Chilcott, Morris Plains, N.J. 07950.

New Members

Navinkumar J. Amin, M.D., 820 A. Ravensridge, St. Louis, has become a member of St. Louis Medical Society. Dr. Amin is a native of Tringa, Tanzania, received his preliminary education at Government Indian Secondary School and his M.D. degree at Gordhandas Sunderdas Medical College in 1966. He specializes in ophthalmology.

Vatche H. Ayvazian, M.D., 653 S. New Ballas Rd., St. Louis, has become a member of St. Louis County Medical Society. Dr. Ayvazian is a native of Beirut, Lebanon, received his preliminary education at Hovagimian-Manougian School for Boys and his M.D. degree at the American University of Beirut in 1962. He specializes in general surgery.

Rogelio L. Bautista, M.D., 601 S. Brentwood, St. Louis, has become a member of St. Louis County Medical Society. Dr. Bautista is a native of the Philippines, received his preliminary education at Far Eastern University and his M.D. degree at Far Eastern University in 1964. He specializes in surgery.

Andres S. Bonifacio, M.D., 3161 Laclede Ave., St. Louis, has become a member of St. Louis County Medical Society. Dr. Bonifacio is a native of the Philippines, received his preliminary education at Feati University and his M.D. degree at Manila Central University in 1963. He specializes in obstetrics and gynecology.

Harvey E. Cantor, M.D., 1465 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Cantor is a native of St. Louis, received his preliminary education at Washington University and his M.D. degree at Washington University in 1962. He specializes in neurology.

William W. Clendenin, M.D., 950 Francis Pl., St. Louis, has become a member of St. Louis Medical Society. Dr. Clendenin is a native of Martin, Tenn., received his preliminary education at the University of Tennessee and his M.D. degree at the University of Tennessee in 1963. He specializes in psychiatry.

Oblendo A. Cuento, M.D., 649 S. New Ballas Rd., St. Louis, has become a member of St. Louis County Medical Society. Dr. Cuento is

a native of Batangas, Philippines, received his preliminary education at Letran College and his M.D. degree at the University of Santo Tomas in 1965. He specializes in general surgery.

Mary A. Davis, M.D., 1420 Grattan, St. Louis, has become a member of St. Louis Medical Society. Dr. Davis is a native of Detroit, received her preliminary education at Ohio State University and her M.D. degree at Washington University in 1952. She specializes in psychiatry.

David Duncan, M.D., 2850 W. Clay, St. Charles, has become a member of St. Charles-Lincoln County Medical Society. Dr. Duncan is a native of Muskegon, Mich., received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1963. He specializes in obstetrics and gynecology.

Arthur Z. Eisen, M.D., Barnes Hospital Plaza, St. Louis, has become a member of St. Louis Medical Society. Dr. Eisen is native of Toronto, Ontario, received his preliminary education at Buffalo, N. Y., and his M.D. degree at the University of Pennsylvania in 1957. He specializes in dermatology.

Daniel C. Fabito, M.D., 1621 Kenilworth Dr., St. Louis, has become a member of St. Louis County Medical Society. Dr. Fabito is a native of the Philippines, received his preliminary education at the University Institute of Arts and his M.D. degree at the University Institute of Medicine in 1964. He specializes in general and vascular surgery.

Bernard F. Fehlman, Jr., M.D., 6420 Clayton Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Fehlman is a native of Casper, Wyo., received his preliminary education at the University of Tulsa and his M.D. degree at St. Louis University in 1951. He specializes in anesthesiology.

Gary W. Ferris, D.O., 1030 S. Park Dr., Columbia, has become a member of St. Louis County Medical Society. Dr. Ferris is a native of Kansas City, Kan., received his preliminary education at the University of Missouri-Kansas City and his D.O. degree at the Kansas City College of Osteopathy & Surgery in 1968. He is in general practice.

Morton R. Green, M.D., 301 W. Lincoln, Belleville, Ill., has become a member of St. Louis Medical Society. Dr. Green is a native of Pittsburgh, Pa., received his preliminary education at Washington University and his M.D. degree at the University of Missouri in 1964. He specializes in ophthalmology.

Santiago Y. Hallazgo, M.D., 2686 Tyrell Dr., St. Louis, has become a member of St. Louis County Medical Society. Dr. Hallazgo is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1950. He is in general practice.

John R. Hamilton, III, M.D., 6744 Clayton Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Hamilton is a native of Santa Barbara, Calif., received his preliminary education at the University of Southern California and his M.D. degree at St. Louis University in 1960. He specializes in internal medicine and cardiology.

William P. Hamilton, M.D., 615 S. New Ballas Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Hamilton is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at the University of Texas in 1962. He specializes in cardiology and internal medicine.

Sheila E. Hodgson, M.D., 510 S. Kingshighway, St. Louis, has become a member of St. Louis Medical Society. Dr. Hodgson is a native of Sleaford, England, received her preliminary education at Manchester University and her M.D. degree at Woman's Medical College in 1964. She specializes in radiology.

Mohammed N. Islam, M.D., 300 G. Enchanted Pkwy., St. Louis, has become a member of St. Louis County Medical Society. Dr. Islam is a native of Malda, India, received his preliminary education at Notre Dame College and his M.D. degree at Dacca Medical College in 1962. He specializes in general surgery.

Bernard M. Jaffe, M.D., 1515 Lafayette Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Jaffe is a native of New York, N. Y., received his preliminary education at the University of Rochester and his M.D. degree at New York University in 1964. He specializes in general surgery.

Mohammed A. Kabir, M.D., 823 Westwood Dr., St. Louis, has become a member of St. Louis

County Medical Society. Dr. Kabir is a native of Naokhali, Pakistan, received his preliminary education at Calcutta University and his M.D. degree at Dacca University in 1956. He specializes in psychiatry.

George Karadimos, M.D., 255a Glandore Dr., Ballwin, has become a member of St. Louis County Medical Society. Dr. Karadimos is a native of Thessaloniki, Greece, received his preliminary education at Anatolia American College and his M.D. degree at the University of Thessaloniki in 1954. He specializes in general surgery.

Chung H. Khan, M.D., 7521 W. Florissant, St. Louis, has become a member of St. Louis County Medical Society. Dr. Khan is a native of Seoul, Korea, received his preliminary education at Yonsei University and his M.D. degree at Yonsei University in 1963. He specializes in general surgery.

Joseph A. Kopta, M.D., 4960 Audubon Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Kopta is a native of Boston, Mass., received his preliminary education at the University of Oklahoma and his M.D. degree at the University of Oklahoma in 1962. He specializes in orthopaedic surgery.

Vincente W. Kwan, M.D., 1040 Pinegate, St. Louis, has become a member of St. Louis Coun-



"The next time you come up this way, fellows, bring a couple of copies of MISSOURI MEDICINE. We'd appreciate it!"



Efudex[®]

(fluorouracil)
cream/solution

In the treatment of
solar/actinic keratoses—
An alternative
to cold, fire and steel

2/23/68

Before treatment with 5% 5-FU cream.
Patient R. G., 78 years old, shows
extensive skin changes due to weathering
and severe solar/actinic keratoses.

3/26/68

Following one month of therapy. Intense
erythematous reaction is seen at sites of
keratoses. Normal skin has not reacted.
Some areas which had reacted initially
have undergone healing despite continued
topical application of 5% 5-FU.

6/11/68

Ten weeks after discontinuance of
therapy. All areas have healed completely.
Residual mild erythema remains in some
areas. This patient also had seborrheic
keratoses which, as expected, have not
reacted. There is no evidence of residual
lesions or recurrences.





Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

An alternative to conventional therapy

Efudex (fluorouracil) offers the physician a topical alternative to cryosurgery, electrodesiccation and cold-knife surgery in the treatment of solar/actinic keratoses. It is effective, comparatively inexpensive and especially well suited for treatment of these multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

Highly effective

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When new lesions appeared, repeated courses of Efudex therapy proved effective.*

Predictable therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two or three months before gradually receding. Since this response is so predictable, lesions which do not respond should be biopsied.

Two strengths—two dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two important considerations: First, please consult the complete prescribing information for precautions, warnings

and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



new
Efudex®
(fluorouracil)
cream/solution

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

New Members

(Continued from page 168E)

ty Medical Society. Dr. Kwan is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at Far Eastern University in 1958. He specializes in internal medicine and cardiology.

Henry J. Llewellyn, M.D., Barnes Hospital Plaza, St. Louis, has become a member of St. Louis Medical Society. Dr. Llewellyn is a native of Philadelphia, Pa., received his preliminary education at the University of Houston and his M.D. degree at the University of Texas in 1962. He specializes in radiology.

Barry D. Lomove, D.O., 1189 Rue La Chelle, Creve Coeur, has become a member of St. Louis County Medical Society. Dr. Lomove is a native of Brooklyn, N. Y., received his preliminary education at Hofstra College and his D.O. degree at Kansas City College of Osteopathy & Surgery in 1967. He is in general practice.

Kathleen McLaughlin, M.D., 2415 N. Kingshighway, St. Louis, has become a member of St. Louis Medical Society. Dr. McLaughlin is a native of St. Louis, received her preliminary education at St. Louis University and her M.D. degree at Washington University in 1964. She specializes in pathology.

Gil B. Manalo, Jr., M.D., 805 Locust, St. Louis, has become a member of St. Louis County Medical Society. Dr. Manalo is a native of Kabacan Botabato, Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1958. He specializes in general surgery.

Roger L. Mell, M.D., Barnes Hospital Plaza, St. Louis, has become a member of St. Louis Medical Society. Dr. Mell is a native of Bonne Terre, received his preliminary education at the University of Missouri and his M.D. degree at Washington University in 1965. He specializes in orthopedic surgery.

Elsie F. Meyers, M.D., 6150 Oakland Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Meyers is a native of Wolcottville, Ind., received her preliminary education at Indiana University and her M.D. degree at Indiana University in 1950. She specializes in anesthesiology.

Jerry N. Middleton, M.D., 432A N. Sappington, St. Louis, has become a member of St.

Louis County Medical Society. Dr. Middleton is a native of St. Louis, received his preliminary education at Westminster College and his M.D. degree at Washington University in 1963. He specializes in obstetrics and gynecology.

Alejandro C. Ojascastro, M.D., 3654 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Ojascastro is a native of the Philippines, received his preliminary education in the Philippines and his M.D. degree at the University of Santo Tomas in 1958. He is in general practice.

Amado P. Ortillo, M.D., 1615 Hobnail Ct., St. Louis, has become a member of St. Louis County Medical Society. Dr. Ortillo is a native of the Philippines, received his preliminary education at Western Pangasinan College and his M.D. degree at the University of Philippines in 1961. He specializes in obstetrics and gynecology.

Sadashiv D. Parwatikar, M.D., 5400 Arsenal, St. Louis, has become a member of St. Louis Medical Society. Dr. Parwatikar is a native of Hyderabad, India, received his preliminary education at Nizam College and his M.D. degree at Osmania University in 1961. He specializes in psychiatry.

Varkey Philip, M.D., 8660 Old Towne Dr., University City, has become a member of St. Louis County Medical Society. Dr. Philip is a native of Madras, India, received his preliminary education at Madras Christian College and his M.D. degree at Stanley Medical College in 1962. He specializes in general surgery.

Cary A. Presant, M.D., 8914 Eager Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Presant is a native of Buffalo, N. Y., received his preliminary education at the University of Buffalo and his M.D. degree at the University of Buffalo in 1966. He specializes in internal medicine.

Ronald C. Reisa, M.D., 2850 W. Clay, St. Charles, has become a member of St. Charles-Lincoln County Medical Society. Dr. Reisa is a native of Chicago, Ill., received his preliminary education at Loyola University and his M.D. degree at St. Louis University in 1963. He specializes in obstetrics and gynecology.

Ronald B. Rice, M.D., 119 First Capitol Dr., St. Charles, has become a member of St. Charles-Lincoln County Medical Society. Dr. Rice is a native of Council Bluffs, Ia., received his preliminary education at Indiana University and his

M.D. degree at Indiana University in 1958. He specializes in internal medicine.

Fredric M. Simowitz, M.D., 538 Chalet Court, St. Louis, has become a member of St. Louis Medical Society. Dr. Simowitz is a native of Augusta, Ga., received his preliminary education at Ohio State University and his M.D. degree at the Medical College of Georgia in 1962. He specializes in neurology.

Felix G. Solomon, M.D., 1424 Bob O Link Place, St. Louis, has become a member of St. Louis County Medical Society. Dr. Solomon is a native of Bataan, Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1948. He specializes in anesthesia.

Alphonse J. Squitieri, M.D., 9616 Lakeland Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Squitieri is a native of New York, N. Y., received his preliminary education at Dartmouth College and his M.D. degree at St. Louis University in 1962. He specializes in internal medicine.

Kurt F. Strobach, M.D., 615 New Ballas Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Strobach is a native of St. Louis, received his preliminary education at Rockhurst College and his M.D. degree at the University of Missouri.

Steven L. Teitelbaum, M.D., 216 S. Kingshighway, St. Louis, has become a member of St. Louis Medical Society. Dr. Teitelbaum is a native of Brooklyn, N. Y., received his preliminary education at Columbia University and his M.D. degree at Washington University in 1964. He specializes in pathology.

Thomas J. Toon, D.O., 3932 Canterbury Dr., Normandy, has become a member of St. Louis County Medical Society. Dr. Toon is native of Philadelphia, Pa., received his preliminary education at Eastern College and his D.O. degree at Kirksville College of Osteopathy & Surgery in 1942. He is in general practice.

Manit Vajaranant, M.D., Medical Clinic, Lexington, has become a member of Lafayette-Ray County Medical Society. Dr. Vajaranant is a native of Buriram, Thailand, received his preliminary education at Chulalongkorn University and his M.D. degree at the University of Medical Sciences in 1952. He specializes in obstetrics and gynecology.

Edwin E. Westura, M.D., 1325 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Westura is a native of Morristown, N. J., received his preliminary education at St. Peters College and his M.D. degree at Creighton University in 1957. He specializes in cardiology.

R. Dean Wochner, M.D., 1515 Lafayette, St. Louis, has become a member of St. Louis Medical Society. Dr. Wochner is a native of York, Neb., received his preliminary education at Arizona State University and his M.D. degree at Washington University in 1960. He specializes in internal medicine.

David I. Wolf, M.D., 12612 Markaire Dr., St. Louis, has become a member of St. Louis County Medical Society. Dr. Wolf is a native of New York, N. Y., received his preliminary education at Cornell University and his M.D. degree at New York University in 1964. He specializes in ophthalmology.

AMA Conference on Rural Health in Atlanta

The 24th National Conference on Rural Health will be held at the Atlanta Marriott Motor Hotel in Atlanta, Ga. on March 25-26.

"Community Health Programs for Tomorrow" will be the theme of the conference which is sponsored annually by the Council on Rural Health, American Medical Association.

Conference goals this year will be (1) to discuss effective ways for delivery of health services to all people in rural areas, (2) to develop planning methods for community or-

ganization for health services, (3) to assess the effect of environmental factors on health, safety and well-being of people living in rural areas and (4) to review methods for efficient utilization of health resources.

The Conference will convene at 9 AM on March 25 and conclude at 3 PM on March 26. Registration will open at 8 AM on March 25. There will be no registration fee.

For further information, contact the Council on Rural Health, AMA, 535 N. Dearborn, Chicago, Ill. 60610.



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CARL H. IDE, M.D., *Columbia*

The Diagnosis of Retinal Detachment

CLINICAL SYMPTOMS AND SIGNS of retinal detachment are typical; their early recognition is of utmost importance. It behooves one to be aware of the fact that any intraocular hemorrhage, however small, should be considered to be due to a retinal tear unless proven otherwise. Vision, temporarily blurred by an intraocular hemorrhage, may return to normal only to be followed by a detachment of the retina at a later date.

DEFINITION

Retinal detachment is a separation of the retina between the inner (neural) layers and the pigment epithelium. The cleavage occurs between the structures which are derived embryologically from the inner and outer layers of the optic cup. Only weak attachments exist between the two layers except at the optic disc and the ora serrata.

HISTORICAL REVIEW

Coccius (1853)¹ was the first person to recognize holes and tears in the retina shortly after the introduction of the ophthalmoscope. In 1854, the first volume of the "Archiv für Ophthalmologie" contained an article by von Graefe² with a discussion of retinal detachment. He wrote: "Objectively, the retina is characterized by a blueish or blue-grey light, which it reflects, and by the tortousity of the vessels that elongate and shorten during the movements of the eye. Upon close examination one can always see the

folds of the membrane and a variable amount of fluctuation or undulation." In his paper on "Anatomical Contributions to Ophthalmology," Müller (1858)³ gave a pathological report of an eye in which the detached retina had the form of a funnel. He believed that in this case "the dislocation of the retina was not caused by pressure from behind but from traction from in front."

Leber (1882)⁴ had mentioned in his lectures that a sudden detachment of the retina could not occur without a hole. Lister (1924)⁵ stated that if "there is a hole in the retina, transposition of fluid from the vitreous chamber through the hole into the inter-retinal space can readily take place, floating up the retina and causing a sudden loss of sight" (Fig. 1).

In recent years, optically superior direct and indirect ophthalmoscopes have been developed,

The prognosis of repair of a recent retinal detachment often is favorable. Clinical manifestations of this condition, therefore, should be familiar to every physician so that a patient with suspected retinal detachment can be referred to the specialist without delay. Doctor Ide is Associate Professor of Ophthalmology and Head of the Retina Service at the University of Missouri School of Medicine.

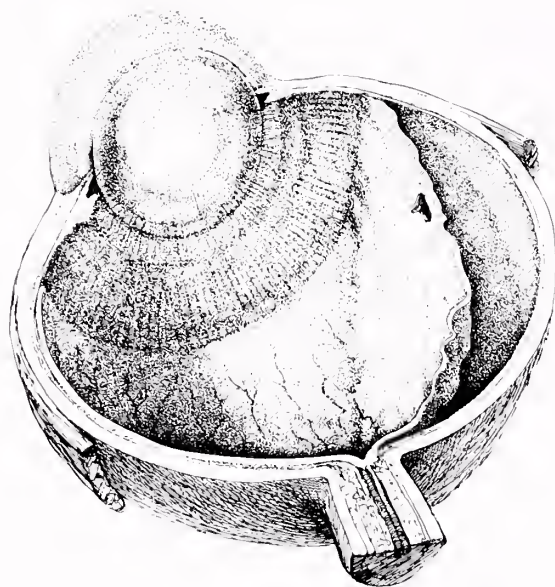


Fig. 1 Retinal detachment with horseshoe tear in infero-temporal quadrant.

facilitating the finding of retinal tears and the diagnosing of possible retinal detachment.

CLINICAL SYMPTOMS

Operation of a recent case of retinal detachment by scaling off the tears offers a greater chance for reattachment and a better prognosis for vision than surgical repair of a long standing detachment in which degenerative changes in the retina have taken place. For the practising physician, early diagnosis of retinal detachment is, therefore, of particular importance. Although a detachment of the retina may occur within one day, it is usually preceded by definite clinical symptoms.

The complaint of a sudden appearance of



Fig. 2 Horseshoe tear in detached retina.

spots or black floaters may be due to a hemorrhage into the vitreous caused by a ruptured blood vessel lying across a retinal tear (Fig. 2).

Flashes of light, attributed to traction by vitreous adhesions to the retina, are observed frequently by the patient. Their presence indicates the possibility of an imminent formation of a retinal hole or detachment. It has to be noted, however, that there are many cases in which flashes of light occur only upon occasion and in some, never.

A partial or total detachment of the retina leads to a corresponding loss of the visual field. If the detachment involves the periphery of the retina, the patient may still have a visual acuity of 20/20. As it progresses toward the macular area, he will notice a marked decrease in his vision.

CLINICAL SIGNS

The eye may appear to be normal by external examination. If a retinal detachment is present, it usually can be demonstrated by a visual field defect. A confrontation test, if properly performed, may be of great value in estimating the area detached. The intraocular pressure is often less than that of the uninvolved eye.

Ophthalmoscopy with widely dilated pupil is the most important step in the evaluation of an eye with possible retinal detachment. In some cases, this can be accomplished with ease; in others, considerable difficulty is encountered due to uveal reaction, hemorrhage or inability of satisfactory pupillary dilatation. A retinal tear without surrounding retinal detachment may be difficult to see. It is small at times and does not give sufficient contrast. The observation of an operculum, a round area of retina torn off from its surrounding structure and floating in the vitreous, can be of help in the finding of a retinal hole.

Four different types of retinal holes are recognized: the horseshoe tear, with its convexity always pointing to the direction of the optic disc (Fig. 2); the round hole, giving a punched-out appearance; the irregular hole, often due to trauma; and the dialysis, the tearing of the retina at its attachment at the ora serrata. A retinal detachment can be shallow and barely noticeable or high and conspicuous (Fig. 3). The normal fundus reflex is not seen; instead, the detached area will appear greyish. Through the tear, the red choroid is often visible. The retinal vessels are darker than usual and arterioles can hardly be distinguished from veins by their color.

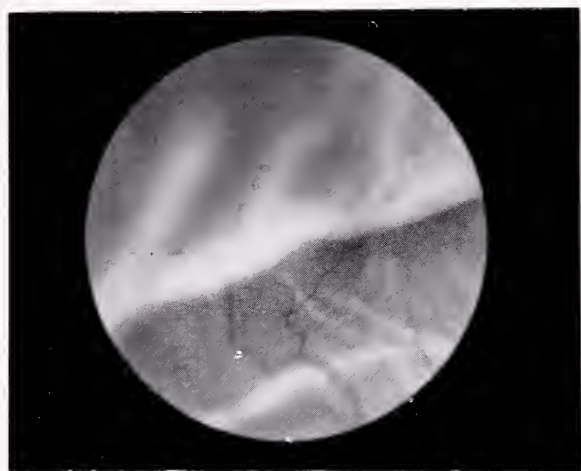


Fig. 3 Bullous retinal detachment. In the upper half of the photograph, the retina is highly elevated.

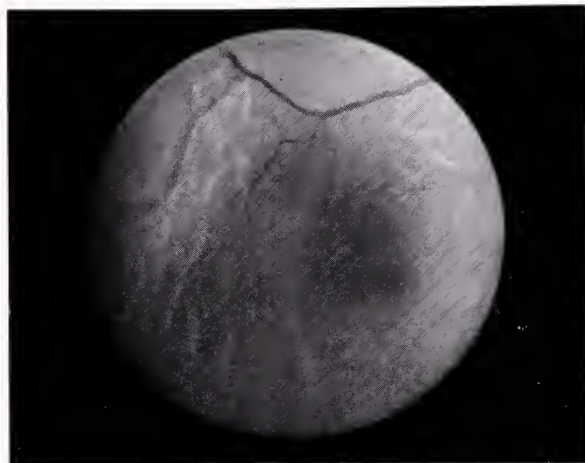


Fig. 4 Numerous small folds are seen in the posterior area of the fundus giving a wavy appearance to the detached retina.

At times, numerous small waves (Fig. 4) characterize the detached area. In a high retinal separation, the blood vessels following the retinal folds appear very tortuous. They may be seen to undulate with the movements of the detached retina.

CAUSES OF RETINAL DETACHMENT

Three major mechanisms⁶ can cause retinal detachment.

1. In an atrophic and degenerated peripheral retina, the tugging of the vitreous in an area of its adhesion to the retina may produce a tear. Fluid from the vitreous then passes through the break separating the retina from its pigment epithelium layer.

2. The organization of hemorrhages and inflammatory exudates in the vitreous may detach the retina. Vitreous hemorrhage and fibrovascular proliferation are characteristically found in diabetic retinopathy (Fig. 5).

3. Disturbances in the retinal circulation, as they are seen in hypertensive retinopathy and retinal venous occlusion, may lead to a detachment of the retina. In toxemia of pregnancy, subretinal exudate may be of such volume as to cause extensive retinal detachment.⁷ It may occur in the absence of retinopathy and possibly is due to disturbance of the choroidal circulation.

Retinal detachment may result from a perforating injury to the eye or from contusion to the globe. Since the onset of the detachment is often delayed, a careful retinal examination is indicated in every case of ocular trauma. A patient who has undergone cataract extraction has a definitely increased chance of getting a retinal detachment. In a recent publication, Witmer⁸



Fig. 5 Retinal hemorrhages and fibrous proliferation extending into the vitreous are observed in diabetics. Retinal detachment may result.

(University of Zurich) found an incidence of 2.3% of retinal detachment following cataract extraction. This percentage is definitely higher than that of the normal population. If a patient has a retinal detachment in one eye, there is, according to Schepens and Marden,⁹ a 19% chance of occurrence of a detachment in the fellow eye.

SUMMARY

Symptoms and signs of retinal detachment are reviewed. Their early recognition is emphasized. A short description of the mechanism causing this disease is given.

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(Continued on page 186)

Nasal Reconstruction

NASAL RECONSTRUCTION was first described 2,000 years ago in the writings of the Brahman holy books, the *Susrita Veda*,¹ in India. Techniques for restoring mutilated noses by means of cheek and forehead flaps were described. Nasal amputation was a common punishment for certain offenses and it fell on the lowly caste tile makers to perform these procedures.

During Roman times, the Middle Ages and Renaissance, we have no documented nasal reconstructive surgery. Gasparo Tagliacozzi,² professor of surgery in Bologna, published nasal flap reconstruction from the arm (16th century), later to be known as the Italian method. The church viewed his surgery with great disfavor, considering that it interfered with the will of God, so much so, that on his death, he was buried in unconsecrated ground. Later, he was returned to rest in a chapel that today bears his name.

Nasal reconstructive surgery appears to have been neglected and to have fallen into disrepute during the following 200 years. Interest was revived during the 19th century, probably because of an increase in nasal disfigurement resulting from duel and battle trauma, cancer, scrofula, syphilis and noma. The case of Cowasjee,³ and Indian ox driver in the pay of the British Army, had been published in the *Madras Newspaper* in 1793. This man's nose was amputated by Typo-Sahib to punish him for

treachery. A forehead flap nasal reconstruction was performed by a member of the tile maker caste. This story prompted Carpué, an English surgeon, to attempt this operation, and in 1814, he published reports of successful results of two cases. After this, forehead flap and arm flap nasal reconstructions were performed by many European surgeons and a third method using a sliding cheek flap technique was popularized by French surgeons.

The forehead flap was popular in early days. Difficulty with vascularity due to kinking was alleviated by modifications in the incisions outlining the base of the pedicle. Contracture of the tip and nasal opening often occurred and caused the immediate postoperative results to become distorted. Denanvilliers, in the late 19th century, commented that all that surgery accomplished was to "replace a disgusting deformity by a ridiculous one." Keegan realized the necessity for providing a lining to eliminate postoperative retraction. This was accomplished in three ways; first, by folding the distal end of the flap upon itself to form the tip, ala and columella (Petralli, 1840); second, by turning down as a flap the integument of the remaining portions of the nose (Volkman, 1874); and third, by split thickness skin grafts (Lossen, 1898).

To provide adequate length and permit folding the end of the forehead flap on itself, Auvert (1877) utilized a flap slanting across the forehead. The base was positioned to include the blood supply from the supra-orbital vessels on one side. Still further length was obtained when Gillies (1935)⁴ designed his "up and down" flap and Converse (1942)⁵ extended this idea with his "scalping flap." New (1945)⁶ described the "sickle" flap, a delayed temporal flap, and Schmid (1952) devised the horizontal supra-orbital flap. These were useful for reconstructing partial defects of the nose.

Earlier reconstructive procedures did not utilize a framework. As more of these operations were done, however, it became apparent that support was needed to prevent collapse of the reconstructed nose. Rousset (1828) suggested the introduction of removable gold or silver as

Nasal reconstruction appears to have originated 2,000 years ago in India to restore noses amputated for punitive reasons. The forehead flap was the method used. Arm flap reconstruction was popularized by Tagliacozzi in Italy in the 16th century. In the 19th century, European surgeons revived the Hindu method and a modification of this technique is used today. The authors review the history of nasal reconstruction and discuss current surgical methods. Doctor McGibbon is a Resident and Doctor Paletta is Director of Plastic Surgery, St. Louis University School of Medicine.

a support. A variety of metals and substances such as ivory, amber, rubber and platinum also were used for support. Some workers tried wrapping the flaps around supports which were not removable. These included frontal bone attached to the forehead flap. Later, free bone transplants were placed beneath the flap. Nelaton (1900) transplanted cartilage under the forehead flap before its transfer. Cartilage, bone or silastic implants also are used for support following flap transfer.

INDICATIONS FOR NASAL RECONSTRUCTION

1. NEOPLASM
2. TRAUMA
 - A. Auto
 - B. Burns
 - C. Accidents
3. INFECTION
 - A. Leprosy
 - B. Lupus Vulgaris
 - C. Smallpox
 - D. Infectious Diseases
4. CONGENITAL
 - A. Aplasia
 - B. Syphilitic
5. POSTIRRADIATION

Method of Reconstruction Depends on Extent of Loss

When there is only skin covering loss, looseness of skin of the upper part of the nose, particularly in the older person, facilitates primary closure. In contrast, skin of the lower part is adherent to the underlying cartilage and requires full thickness skin graft or local flap rotation. The Esser⁷ "banner" flap (Fig. 1) or Zimany bilobed flap (Fig. 2) are particularly suitable. Flaps rotated from the nasolabial area can be superiorly or inferiorly based. In male patients, the flap should be taken above the nasolabial fold to avoid the bearded area.

If there is a nasal lining defect, full thickness postauricular skin or mucous membrane from the lingual aspect of the lower lip may be used

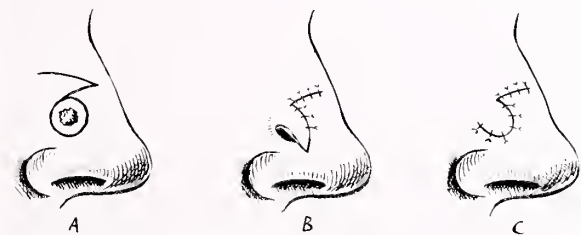


Fig. 1 Esser "banner" flap (A. Stage One, B. Stage Two, C. Stage Three).

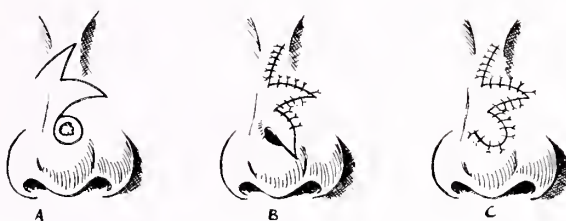


Fig. 2 Zimany bilobed flap (A. Stage One, B. Stage Two, C. Stage Three).

as an inlay graft with a prosthetic mold after resection of the internasal searing or obstructing tissues. After the mold has been removed six or seven days postoperatively, a secondary thin acrylic prosthesis is inserted and worn for three to six months, being removed only for short periods of time for cleaning to prevent graft from contracting.

Full thickness nasal tissue loss may vary from a defect of one ala to total loss of the nose. When more than half the nose has been lost or if the loss is on one side, it is best to sacrifice that part of the nose that remains and reconstruct the whole nose to get an acceptable and symmetrical result.

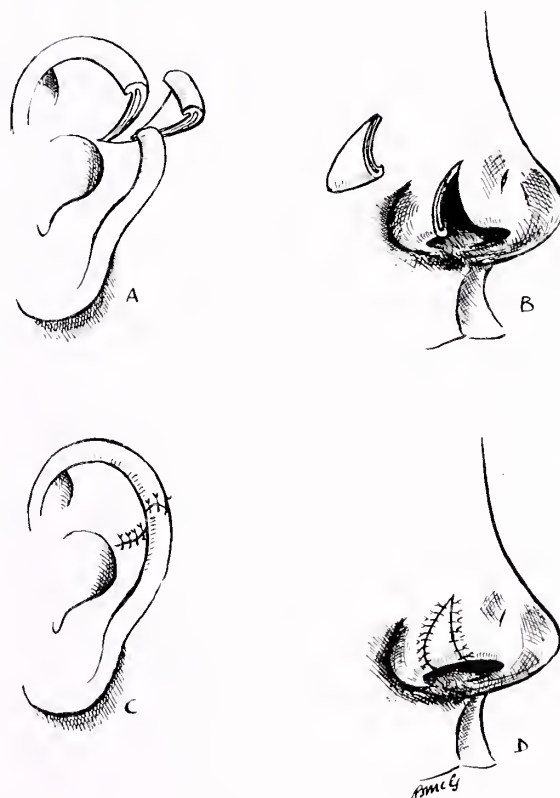


Fig. 3 Composite graft (A. Stage One, B. Stage Two, C. Stage Three, D. Stage Four).

COMPOSITE GRAFTS (Fig. 3)

The great vascularity of the nose occasionally permits the use of composite grafts despite the restrictive surface of contact through which the lost vessels penetrate. Small alar defects resulting from sharp trauma can be corrected this way. However, when the defect is associated with dense scarring, e.g., burns and the recipient bed is less vascular, it is better to resort to nasolabial flap reconstruction.

LOCAL PEDICLE FLAPS (Figs. 4 & 5)

Nasolabial flaps are useful in repairing small alar defects and have the best color match.

FOREHEAD FLAPS

The forehead flap is considered the best method for reconstructing large defects of the nose that are too large to be repaired by local flaps or by composite grafts. Advantageous factors are the good color and texture match, the adequate blood supply to the flap and the absence of discomfort as compared to the Tagliacozzian (Italian) method. A disadvantage is the secondary scarring of the forehead.

Following are various types of forehead flaps, depending on their position:⁸

1. *Median Forehead Flap* (Fig. 5a) (modified classical Indian method) was repopularized by Kazanjian, 1946. The flap is reflected by careful subperiosteal dissection to avoid injury to

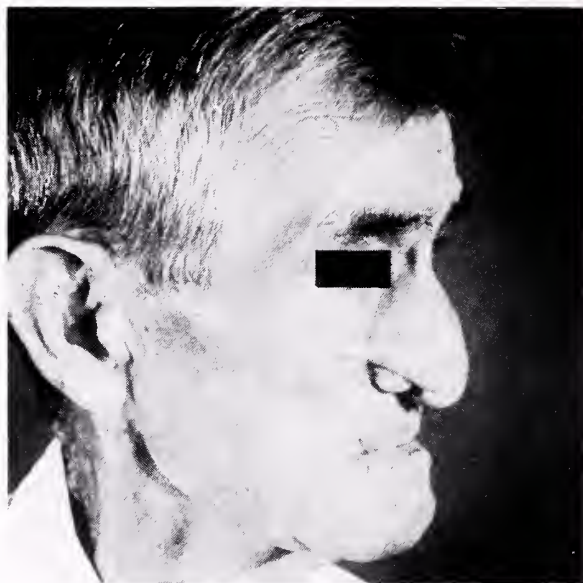


Fig. 4 Nasolabial flap before detachment of pedicles.

the subtrochlear vessels. After adequate undermining, primary closure is obtained, thus minimizing the resulting forehead scarring.

2. *The Oblique Flap* (Figs. 5b & 6) gives greater length, and if the flap (Figs. 7 & 8) is "delayed," a narrowed pedicle can be utilized.

3. *The "Up and Down" Flap* (Fig. 5c), popularized by Sir Harold Gillies, gives greater length and mobility.

4. *The Scalping Flap* (Fig. 5d), devised by

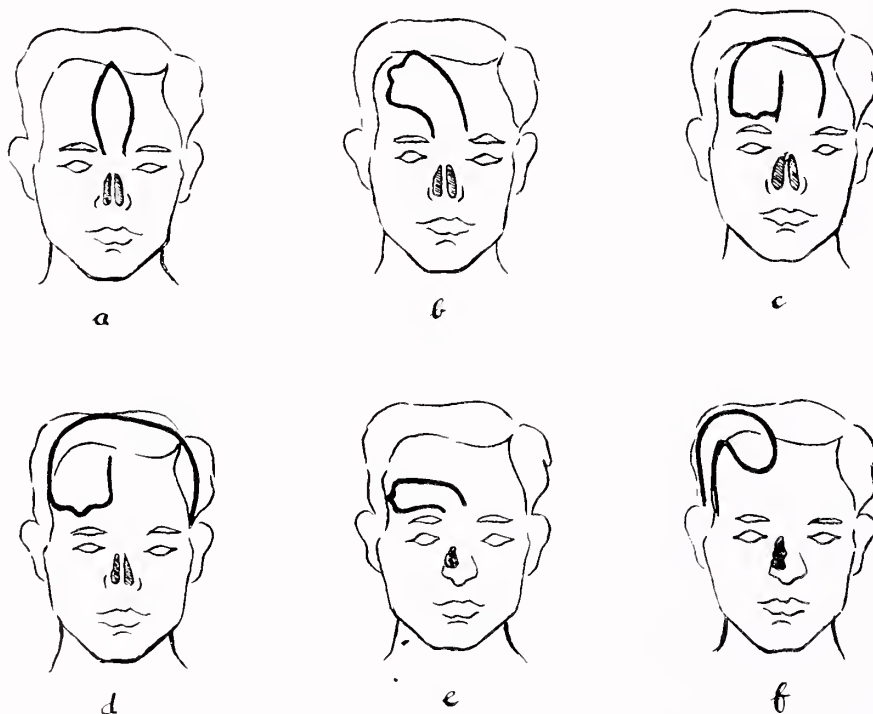


Fig. 5 Classification of forehead flaps: a. median, b. oblique, c. "up and down," d. scalping, e. horizontal, f. sickle.



Fig. 6 Oblique forehead flap before rotation.

Converse, is a stage further than the "Up and Down Flap." It has the advantage of producing a secondary defect on the side of the forehead and, thus, is less noticeable, with the rest of the scars being hidden in the hairline.

In none of the above methods is the frontalis muscle incorporated in the flap. Therefore, forehead expression is not interfered with. The temporary forehead and scalp defect is covered with split thickness skin graft (Fig. 9). The pedicle of the flap is transected after three weeks. The skin graft "dressing" is removed from the forehead defect and the pedicle is returned to its original site.

Delaying of forehead flaps usually is not necessary because of the very good blood supply. Furthermore, raising the flap in a preliminary delay step results in scarring of the undersurface of the flap with resulting stiffness and difficulty in turning the end of the flap in to produce the ala and columella.

TEMPORAL FLAPS (Fig. 5f)

The "sickle" flap described by New has the advantage of producing secondary scarring in the temporal area where it can be camouflaged by the hairline. Its disadvantage is that the flap is kinked on itself thus interfering with ve-



Fig. 7 Oblique forehead flap in position, note catheter in newly formed nostrils.



Fig. 8 Before detachment of the pedicle, with temporary forehead split skin graft.

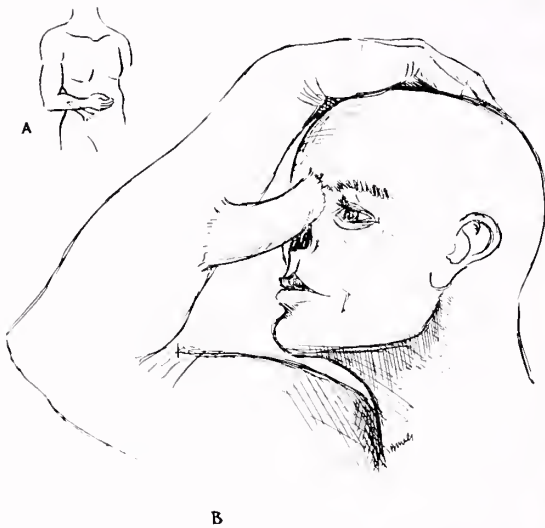


Fig. 9 Transfer of abdominal tubed pedicle flap for nasal reconstruction (A. Stage One, B. Stage Two).

nous drainage. Also, it tends to hang across the eye of the patient.

NONFACIAL FLAPS (Fig. 10)

These are useful when forehead scarring is present, or when it is elected to defer the use of a forehead flap until later, e.g., waiting until a child matures before definitive reconstruction is performed. Disadvantages of nonfacial flaps are the bad color match, they are bulky and uncomfortable (Tagliacozzian) and a "delay" is usually necessary.

Provision of skin lining for flaps in nasal reconstruction is necessary to prevent the intranasal area from contracting, stenosing and resulting in airway obstruction. Use of skin around the stump of the nose as a "hinge" flap and en-folding the end of the reconstruction flap to form



Fig. 10 Reconstruction of columella by cervical tube. Delaying tube before rotation.



Fig. 11 Reconstruction of columella by cervical tube; second stage, tube rotated into cheek.

the ala and columella is usually all that is necessary. Occasionally, skin grafting of the under-surface is necessary.

LOSS OF COLUMELLA (Fig. 11-14)

Can be reconstructed by a variety of ways, the most popular methods being nasolabial flap, cervical tube and median forehead flap techniques.

NASAL SUPPORT

Not every reconstructed nose will need a strut inserted. However, if it is deemed necessary, it is best deferred for four to six months postoperatively. This allows softening of the tissues and revascularization to be completed. Cartilage, bone or silastic are the materials of choice.

PROSTHETIC REPLACEMENT

Occasionally, because of the patient's age, general condition, disinclination for further surgery or possible recurrence of malignant disease, it is felt that prosthetic replacement is the treatment of choice rather than reconstructive surgery (Fig. 15).

(Continued on page 186)



Fig. 12 Reconstruction of columella by cervical tube; third stage, tube rotated into cheek.



Fig. 13 One year postoperative result. Healed nasal defect.

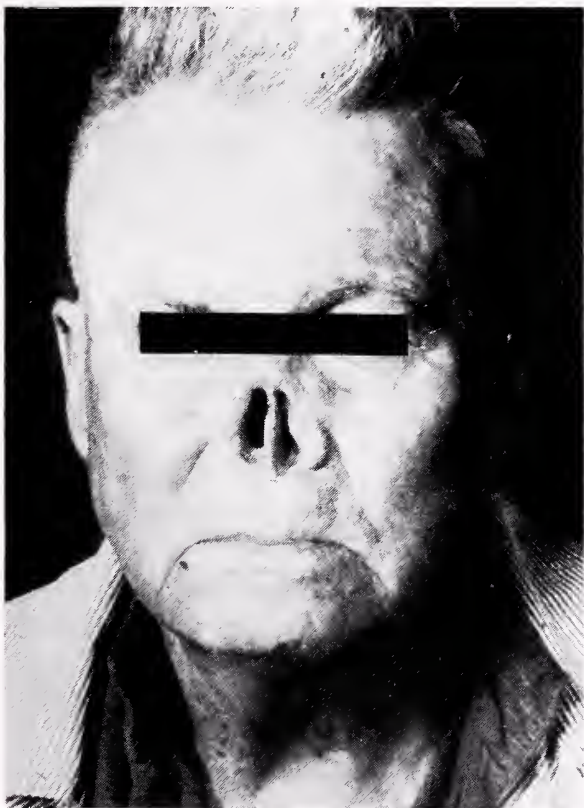


Fig. 14 After excision of basal cell cancer.



Fig. 15 With prosthesis in position.

Current Evaluation and Treatment of Headache

"HEADACHE" ordinarily connotes pain above the level of the eyes, ears or base of the skull. No other type of pain so frequently challenges the practicing physician. Headache "always means 'something wrong' . . . most often . . . 'wrong direction' or 'wrong place.' On the other hand, the headaches of brain tumor, brain abscess, fever, arteritis, meningitis, subdural and subarachnoid hemorrhage and the pains of the major neuralgias and neuritides, which call for prompt and often heroic measures, constitute only a minor portion of the total number of pains in the head. Headache may be equally intense whether its implications are malignant or benign, and though there are few instances in human experience where so much pain may mean so little in terms of tissue injury, failure to separate the ominous from the trivial may cost life or create paralyzing fear."¹ The sheer frequency of headache precludes an extensive diagnostic evaluation in each case. Rather, the patient must be appraised in a clinical outpatient setting, supplemented by ancillary techniques in a few patients. This discussion attempts to provide an understanding of the pathogenesis of headache, to review the data essential for clinical evaluation thereof, to describe the features of ten headache entities and to review the current management of cephalalgia.

ANATOMY AND PHYSIOLOGY OF HEADACHE

Table 1 lists the cranial structures involved in the production of headache. The most common

extracranial sources of headache are the pericranial muscles and the extracranial arteries. Sustained muscle contraction, by traction on pain receptors or by vascular compression with ischemia or by both, produces a steady aching sensation, proportional in severity to the force of contraction, located over the contracting muscle, usually bifrontal, bioccipital, "band-like" around the head or generalized in distribution. Distention of extracranial arteries (but not veins) produces intense aching over the distribution of the affected artery. With each systolic ejection of blood, further distention takes place producing a pulsatile accentuation of pain. Other less common extracranial sources of head pain are the paranasal sinuses which, by engorgement or inflammation of the mucous membranes, produce an aching pain which, in the case of the frontal sinus, is located unilaterally or bilaterally in the frontal area and, in the case of the sphenoid sinus, is located over the forehead or vertex. The final source of extracranial pain is the eyes. Increased intraocular pressure or inflammation produces an aching pain over the globe, which is markedly tender. Traction upon the intraocular or extraocular muscles produces retroorbital aching. Intracranial sources of pain, aching in character, include the dural arteries and venous sinuses, the carotid and basilar arteries and the initial 1 cm to 2 cm of their branches. Traction upon or inflammation of these vessels is the usual precipitating cause. Supratentorial vessels produce frontal pain and infratentorial vessels, occipital pain.

TABLE 1

	ANATOMICAL SUBSTRATE OF HEADACHE		
	SOURCE	CHARACTER	LOCATION
INTRACRANIAL	Pericranial Muscles	Aching	Over Contracted Muscle
	Extracranial Arteries	Throbbing	Over Dilated Artery
	Frontal and Sphenoid Sinus	Aching	Frontal or Vertex
	Eye	Aching	Globe
EXTRACRANIAL	Extraocular Muscles	Aching	Retro-orbital
	Dural Arteries and Veins	Aching	Frontal
	Supratentorial Arteries	Aching	Frontal
	Infratentorial Arteries	Aching	Occipital

TECHNIQUE OF EVALUATING HEADACHE

To properly classify and appropriately treat the patient with headache, the ten items of information in Table 2 are required. A complete neurological examination should be performed and, if indicated, supplemented by skull x-rays, an electroencephalogram and a brain scan. Armed with these data, accurate assignment of the patient's headache to one of the categories to be described should be possible.

TABLE 2

HISTORICAL DATA IN HEADACHE
EVALUATION

1. Approximate date headaches first noticed
2. Distribution of head pain
3. Character of pain (throbbing or aching)
4. Usual frequency of headache
5. Usual duration of headache
6. Associated autonomic symptoms (nausea, or vomiting, lacrimation, rhinorrhea, conjunctival injection)
7. Associated neurological symptoms (monocular, binocular or hemianopic visual symptoms, sensory or motor symptoms, speech disturbance, diplopia)
8. Family history of headache
9. Past history of head injury
10. Any known precipitant (emotional)

CLINICAL VARIETIES OF HEADACHE

A comprehensive classification of headache recently was proposed by an ad hoc Committee of the National Institute of Neurological Diseases and Blindness. In their desire to be complete, this committee included in their classification head pain entities which do not qualify as headache according to the definition proposed in this discussion. Utilizing NIH ad hoc committee nomenclature, patients and physicians usually recognize the following types of cranial pain as "headache."²

(1) *Vascular headache of the migraine type.* The usual common denominator of the migraine group is a "sick headache," that is, a headache associated with nausea or vomiting or both. The best known type, although not the most common, is "classical migraine." In this variety, headache is preceded by an aura, usually of flashing lights or jagged lines in the left or right visual field. Less commonly, the aura consists of hemiparesthesiae, hemiparesis or aphasia. After five to 15 minutes, there is the rather abrupt onset of a frontotemporal throbbing pain on the side opposite the aura, which is followed shortly by nausea and vomiting. The headache usually terminates abruptly after four to six hours. Classical migraine usually has its onset in adolescence or young adult life. The components of the migraine triad do not ordinarily come on together. The initial symptom may be par-

oxysmal visual disturbances or paroxysmal vomiting. The other elements of the triad are usually added within a few months. During late middle age, one or more components of the triad may disappear and the resultant clinical picture is again confusing unless the prior history of migraine is known. In the more usual variety of migraine, referred to as "common migraine," an aura is absent.

(2) *Cluster headache* is another variety of vascular headache. Pain is unilateral, frontal and of high intensity but usually of only one-half hour to one hour duration. The headaches tend to be recurrent during the day, are frequently nocturnal and are associated with ipsilateral conjunctival injection, lacrimation and rhinorrhea. Bouts of headache tend to occur in attacks or "clusters" lasting one to two months with relative freedom between bouts.

(3) *Muscle contraction headaches*, commonly known as "tension" or "nervous" headaches, are aching in quality and are located bifrontally, bioecipitally or in a "band-like" or generalized distribution. Typically, the pain is least intense in the morning and worsens throughout the day. Frequency and duration are variable, but, almost always, headache-free days are interspersed with days of moderate to severe headache. The patient sometimes recognizes an endogenous or exogenous emotional precipitant.

(4) *Hysterical or delusional headaches* may be of any character and location and usually are described as severe and disabling. The patient does not appear to be suffering in proportion to the verbalized complaint. Usually, a variety of other cranial and somatic symptoms are present. Since the hysterical headache expresses a meaning symbolically, the only sure way of making this diagnosis is to "decode" the headache and perceive the message. If this can then be explained to and accepted by the patient, the headache often ceases. Delusional headaches usually are seen in patients with schizophrenia or psychotic depression and are accompanied by other obvious signs of these syndromes.

(5) *Headaches due to intracranial vascular disease.* Cerebral arteriosclerosis itself probably is not a cause of headache. Occlusion of intracranial vessels, whether thrombotic or embolic, frequently is associated with homolateral, frontal or occipital headache, depending upon whether the carotid or basilar arterial system is involved. Intracerebral hemorrhage is associated with headache in similar locations. In all cases of ischemic or hemorrhagic cerebro-vascular dis-

This paper presents a summary of the symposium on headache which was held at the St. Louis University School of Medicine on Oct. 4, 1969. In addition to the authors, the panel members included Drs. Charles Hoffing, Professor of Psychiatry; Paul Young, Associate Professor of Anatomy; Steven Bowen, Assistant Professor of Ophthalmology; and Wilfred Leach, Assistant Professor of Otolaryngology. All are from the St. Louis University School of Medicine, where Doctor Simowitz is an Instructor and Doctor Woolsey is Associate Professor in the Department of Neurology and Psychiatry.

ease, focal neurological signs accompany and overshadow headache. Headaches associated with systemic infection and "hangover" headaches are due to intracranial vasodilatation. They are generalized or bifrontal and aching in character.

(6) *Traction headaches* are due to intracranial mass lesions, such as tumor, hematoma and abscess, which stretch and distort intracranial arteries and veins. Headache, rarely the solitary symptom, usually is accompanied by disturbances of mental function and focal neurological signs. The headache may be frontal, occipital or generalized and its evolution typically shows progression in frequency, duration and intensity. A special variety of traction headache is that seen after spinal tap. This occurs in about 20% of patients undergoing this procedure and usually has its onset during the first day after a lumbar puncture has been performed. The pain is generalized and severe and is markedly relieved when the patient is in the recumbent position. The headaches are self-limiting, usually lasting from one day to one week following the spinal tap.

(7) *Headache due to cranial inflammation* is most commonly due to subarachnoid hemorrhage, meningitis or pneumoencephalography. The pain is of acute or subacute onset, aching in quality, of suboccipital or generalized distribution and markedly aggravated by flexion of the neck. The spinal fluid is bloody or purulent. A rare extracranial inflammatory cause of headache is temporal arteritis. Limited almost exclusively to patients over 50 years of age, the pain is unilateral or bilateral over the frontotemporal area. Subcutaneous arteries are nodu-

lar and exquisitely tender. Low-grade fever is usually present and the erythrocyte sedimentation rate almost invariably is elevated. About one-third of patients with this disorder develop acute blindness in one or both eyes due to involvement of the central retinal artery. Biopsy of the tender arteries reveals a panarteritis with giant cells. The disease responds remarkably to systemic steroid administration.

(8) *Headache due to ocular disease.* Iritis and acute glaucoma are characterized by prominent pain maximal over the globe and extending, to some degree, into the frontal and temporal regions as well. In both conditions, the pain is stamped as ocular by the associated symptoms of redness and tenderness of the eyeball. Extraocular muscle imbalance and refractive errors provoke sustained contraction of the involved muscle resulting in retroorbital or frontal headache or both which the patient identifies as being precipitated by using his vision in reading, sewing, watching television or movies, driving, etc.

(9) *Headache due to paranasal sinus disease* ordinarily is due to acute frontal sinusitis. The pain is bilateral, more rarely unilateral, over the frontal area and is associated with a mucopurulent nasal discharge and fever. Upon examination, the nasal mucosa and the ostia of the frontal sinuses are red and swollen. The pain is characteristically aggravated by the recumbent and relieved by the erect position. Regardless of its celebration among the public, chronic frontal sinusitis rarely, if ever, causes headache.

10) *Occipital neuralgia* is not common but is worthy of mention because of its similarity to "muscle contraction" headache. It is differentiated primarily by an unilateral location and provocation by pressure over the greater occipital nerve which is located 2 cm lateral to and inferior to the external occipital tuberosity, palpable in the midline and base of the skull. The pain is sometimes paroxysmal but usually occurs in attacks lasting several days or weeks. There is sometimes an associated malformation of the craniocervical junction or, more commonly, cervical osteoarthritis.

Table 3 summarizes some of the clinical features of the described headache entities.

TREATMENT OF HEADACHE

The ideal therapy of vascular headache is prophylaxis. A recently discovered ergot derivative, methysergide (Sansert), is remarkably ef-

TABLE 3

		LOCATION OF PAIN	
		UNILATERAL	BILATERAL
CHARACTER OF PAIN	THROBBING	Classical Migraine Cluster Headache Temporal Arteritis	Common Migraine Hypertension
	ACHING	Cerebral Vascular Disease Intracranial Mass Iritis Glaucoma Occipital Neuralgia	Muscle Contraction Meningitis Intracranial Mass Subarachnoid Bleed EOM Imbalance Sinusitis

fective in preventing vascular headaches of all types. However, this drug is expensive and requires the continuous administration of 2 mg two or three times daily. Its usefulness, therefore, is restricted to patients having headaches sufficiently often to justify the cost and inconvenience. Being an ergot derivative, it shares the oxytotoxic and vasoconstrictor properties of this group and, therefore, is contraindicated in hypertension, peripheral or coronary artery disease and in pregnancy. A unique complication of methysergide therapy is retroperitoneal fibrosis with hydroureter and aortic and femoral artery constriction. Patients thus affected experience either backache or pain and swelling in the legs or all three. Less than 100 cases of retroperitoneal fibrosis have been reported since the introduction of this agent more than ten years ago. In the majority of patients, the process reversed itself when the drug was discontinued. All reported cases had been taking methysergide continuously for prolonged periods, and this complication probably can be avoided by a one-month interruption of therapy every six months.

Treatment of the ongoing vascular headache depends upon reconstriction of dilated extracranial arteries. This is most effectively accomplished by using one of the ergotamine tartrate preparations. Inhalant, sublingual, suppository and oral preparations are available and vary only, in that order, in rapidity of onset of action. These medications should be taken as early as possible during the course of the headache and should be repeated at 15-minute intervals until symptoms are controlled or four doses have

been taken. After a vascular headache has been in progress for one half to one hour, vasoconstrictor effects are poor or absent and usually parenteral codeine or meperidine is required for relief. The oxytotoxic and vasoconstrictor effects of ergotamine drugs, like methysergide, preclude their use in the presence of hypertension, coronary or peripheral vascular disease and pregnancy.

All nonvascular headaches, but muscle contraction headache in particular, usually are best managed with analgesic medication. Since it is effective, available, inexpensive and safe, aspirin is most commonly used. The optimal dose is 600 mg (ten grains or two tablets) following which appreciable plasma concentrations are present within 30 minutes and peak levels are reached after about two hours. Apparently, constant blood levels can be maintained by doses spaced four to six hours apart. Approximately 50% of muscle contraction headaches can be satisfactorily relieved with aspirin alone. Two related drugs, phenacetin and acetaminophen, are as effective as aspirin. Combinations of these three drugs are available and widely advertised as "over-the-counter" preparations. There is no evidence that combinations are more effective than any individual drug alone. On the other hand, a combination of any of these antipyretic analgesics with a sedative or muscle relaxant, plus caffeine, permits simultaneous attacks on the anxiety, ischemic and painful facets of the muscle contraction headache and usually relieves approximately 75% of all such headaches. Codeine, 32 mg of which is approximately equianalgesic with 600 mg of aspirin, is no more effective than aspirin alone. However, the combination of these two drugs is superadditive and is very effective in muscle contraction headaches. In contrast to morphine, the addicting qualities of codeine are slight and it can be administered safely on a daily basis to those rare patients in whom very strong analgesia is required.

A variety of synthetic analgesics are available, d-propoxyphene (Darvon) being the most widely used of the group. All of these drugs are considerably more expensive (about ten times the cost) than aspirin and are without a correspondingly greater effectiveness.

All analgesics must be fitted to the particular clinical situation. Patients with occasional, prolonged severe muscle contraction headaches should take two aspirin tablets or an equivalent amount of another analgesic as early as possible

in the course of their headache and repeat the dose every four hours until symptoms subside. Patients with chronic, almost daily, muscle contraction headaches are best treated with an analgesic-tranquilizer combination on a three- or four-times daily regimen. It is particularly in this group of patients that one must consider cost and utilize the antipyretic analgesic-barbiturate combination rather than the considerably more expensive synthetic analgesics and minor tranquilizers.

Treatment of headache with pharmacologically active drugs is, at best, a temporary stop-gap measure. Ultimate success in therapy depends upon supplementing drugs with an apprecia-

tion on the part of both the doctor and patient of the underlying precipitating factors which should then be removed, if possible. When this cannot be done, the patient must at least learn a pattern of adjustment more constructive than flight to chronic headache semiinvalidism.

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Retinal Detachment

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Nasal Reconstruction

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The Society for Contemporary Ophthalmology will hold its first annual meeting on March 4-6 at the Diplomat Hotel and Country Club in Hollywood, Fla. The theme of the meeting is continuing education for excellence in ophthalmology with special emphasis on modern trends in the management of ocular diseases. Individual conferences with the speakers will highlight each session. For further information, contact Society for Contemporary Ophthalmology, 30 N. Michigan Ave., Room 1629, Chicago, Ill. 60602.

Local Anesthetic Toxicity in Obstetrics

Case Report

CHANGES IN THE PATTERNS of use of local anesthetics in obstetrics have become apparent in the past several years. These include significant changes in types of drugs and the administration, not infrequently, of large total milligram doses. In attempts to achieve analgesia, occasional obstetric patients may receive toxic doses of the local anesthetic drugs.

That a real hazard is involved is illustrated by the following case report.

CASE REPORT

A 26-year-old primigravida was admitted to the hospital at term in active labor following an uneventful antepartum course. Significant past medical history included only chronic allergic rhinitis and allergy to sulfasoxazole. Physical examination indicated blood pressure, 120/88; pulse rate, 88; and normal general physical examination. The patient was alert, cheerful and cooperative. A single, term infant estimated to weigh 3,700 to 4,000 gm was presenting as a vertex at -1 station. The cervix was 4 cm to 5 cm dilated. The presenting vertex was at -1 station. Membranes were intact.

Laboratory evaluation revealed the blood type to be O, Rh positive, negative indirect Coombs and hematocrit value to be 35%.

The patient received five paracervical blocks and five increments of medication for continuous caudal block over a period of ten hours, utilizing mepivacaine 1% (Carbocaine). Total dosage, in retrospect, was calculated to be 1,440 mgm. Thirty minutes after the last dose of mepivacaine, the patient was noted to have a staring gaze. She laughed and talked inappropriately and was disoriented to time but not to place. Responses to verbal stimuli were decreased, variable and unpredictable. Examination revealed blood pressure to vary from 160/85 to 180/90 with a tachycardia of 130. Deep tendon reflexes were normal. Oxygen was administered and delivery of an infant weighing 4,001 gm was effected by low forceps. The one minute apgar score was eight.

Two hours and 15 minutes after the last dose of mepivacaine, clearing of the sensorium was apparent, and at seven hours, the patient seemed normal and described her experience as a "bad trip."

DISCUSSION

The use of paracervical block in combination with pudendal block analgesia has the effect of

Utilization of multiple and "continuous" local anesthetic techniques in obstetrics have resulted in patients occasionally receiving toxic doses. The author discusses the most recent local anesthetic drugs and the proper management of maternal toxicity. Doctor Draper was Assistant Professor of Obstetrics and Gynecology at the University of Missouri School of Medicine at the time this paper was written. He is now in the private practice of obstetrics and gynecology in Rolla.

markedly increasing the total dose of local anesthetic drugs. Doses of local anesthetic drugs used in continuous caudal or lumbar epidural anesthetics may mount to high levels, especially in the primigravida.

The more recent local anesthetic drugs belong to the amide-linkage group. Lidocaine (Xyllocaine), mepivacaine (Carbocaine) and prilocaine (Citanest) all belong to this group. These drugs are detoxified by enzyme systems in hepatic microsomes.¹ The half-life of the drugs is about 30 minutes, resulting in prolonged significant blood levels which escalate with frequently repeated doses.²⁻⁵ Absorption following paracervical, pudendal, caudal and epidural injections has been shown to occur with remarkable rapidity.^{3, 6} Peak serum releases are noted after 15 to 45 minutes depending on the route of administration.^{3, 5}

Procaine belongs to the ester series of local anesthetics which are rapidly hydrolyzed in the blood stream by plasma pseudocholinesterases.

Local anesthetic drugs cross the placenta almost immediately by a process of simple diffusion.^{3-5, 7-9} The fetal blood levels equalize at 60% to 80% of the maternal blood levels.^{3, 5} Documented fetal effects include acidosis,^{3, 5, 10, 11} obliteration of beat-to-beat variability in the fetal heart² and fetal bradycardia occurring a few minutes after the maternal injection. The reported rates of fetal bradycardia vary widely

from 3.7%¹² to 7%.¹⁰ Infants observed to have bradycardia associated with local anesthetics are much more frequently depressed at birth.^{5, 8, 13, 14} A few recorded instances of direct fetal injection have resulted in severely affected infants.^{15, 16}

SAFEGUARDS IN LOCAL ANESTHETIC USE IN OBSTETRICS

Because of the possibility of both maternal and fetal intoxication, appropriate safeguards for the administration of local anesthetic drugs should be instituted.

The lowest effective concentration and milligram dosage should be used. One percent concentrations of lidocaine or mepivacaine are preferred. We have found that 10 ml to 16 ml will produce effective paracervical blocks. Similar 16 ml doses are sufficient for adequate pudendal blocks. Even when utilizing serial multiple dose techniques, the total maximum doses of 500 mgm for lidocaine and 1,000 mgm for mepivacaine should not be exceeded.

When performing paracervical or caudal blocks, particular care should be taken to avoid fetal injection.

The fetal heart rate should be closely monitored after injecting local anesthetics, especially during the first 20 to 30 minutes. If there is reason to suspect that the fetus has been affected, rapid delivery should not be attempted. Fetal clearance is much more rapid in utero than after birth.^{3, 9} If delivery is imminent, however, preparations should be made to care for a depressed newborn.

SYMPTOMS OF MATERNAL INTOXICATION

Symptoms of intoxication are of delayed onset, not immediate as in allergic reactions.⁴ Drowsiness is often the first symptom, having been noted in as many of 25% of cases.¹⁷ Subsequently, the patient becomes apprehensive, confused, excitable and even hysterical. Shivering, twitching and muscular fasciculations often precede frank convulsions.^{4, 5, 11, 18}

MANAGEMENT OF TOXICITY

If an obstetric patient shows evidences of local anesthetic toxicity, oxygen should be administered and intravenous fluids started. Respiratory volume, as well as rate, is affected. Supplementation of respirations by bag and mask technique, therefore, usually is advisable. Moore¹⁹ states that the oxygen consumption of the cortex and medulla is greatly increased in the patient with toxic phenomena and that the adequate administration of oxygen will often prevent con-

vulsions. If convulsions do occur, the preferred medication is a muscle relaxant. Because the patient is already depressed, barbiturates should be reserved for those infrequent cases not controlled by muscle relaxants. In addition, since emesis is frequent, airway problems are common.

SUMMARY

A case of apparent mepivacaine intoxication is reported. Relevant facts about local anesthetic use and reactions are reviewed. To avoid such toxic phenomena the following suggestions are made: (1) Use the lowest effective doses and concentrations of the drugs. (2) Do not exceed recommended maximum total dosages. (3) Take special care to avoid fetal injection of the drugs. (4) Monitor fetal heart closely for bradycardia. (5) If delivery is effected soon after fetal bradycardia occurs, provisions for support of a depressed infant should be available.

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Special X-Ray Exhibit

SIDNEY RUBIN, M.D., RODGER LAMBIE, M.D. and
EDWIN HERMAN, M.D., *Kansas City*

Radiologic Problem Case

A 58-YEAR-OLD WOMAN was admitted to the hospital for evaluation of her anemia and a suspected pelvic mass. The anemic state was detected by her physician when she consulted him regarding epigastric pain associated with nausea and vomiting.

Past Medical History: The patient stated that she had been troubled with arthritis for the past two years. She described the arthritis as being migratory and involving the hips, wrists, ankles, knees and fingers. For the past two months, there had been increasing right hip pain which interfered with her walking. She was able to move about with a "walker." The "arthritis pills" that had been administered by her physician were totally ineffective. The patient was aware of an anemic state for several years, and she had been taking a commercial product of iron to correct this condition, but to no avail.

Physical Examination: Significant findings: The patient was thin but not malnourished. The heart was normal by auscultation and percussion. Blood pressure was 150/90. A freely moveable, nontender mass about the size and shape of an egg was palpated in the left adnexa. The proximal interphalangeal joints of the hand were thickened. Slight swelling was apparent over the ulnar head of the right wrist, and ulnar deviation of the wrist was noted bilaterally.

Laboratory Data: The pH of the urine was five to seven on repeated urinalysis. The specific gravity never exceeded 1.007. There was 1+ proteinuria. Occasional red blood cells (RBC) and ten to 12 white blood cells (high-powered field) were found microscopically. No Bence Jones protein was demonstrated.

Repeated hematograms revealed a hemoglobin of 8.0 grams; hematocrit, 25 mm; and RBC's, 2,300,000. The reticulocytes did not exceed 1.1%. There was no evidence of sickling. Serum iron was 49 mcg% and TIBC was 247 mcg% (normal serum iron was 60 mcg%-150 mcg%; TIBC normal was 235 mcg%-450 mcg%). Iron saturation was 20% (28%-42% normal range).

Bone marrow aspirations from ilium and sternum met with little success, and only clusters of cells were observed. The cells noted in the smear were considered *probable atypical plasmacytes*. One hematologist thought that the atypical cells were squamous type cells and considered the possibility of metastatic disease.

A biochemical screen showed the glucose, BUN, uric acid, cholesterol, total protein bilirubin, LDH and SGOT to be within limits of normal. The serum calcium was 14.5 mg% (normal, 8.5 mg%-10.5 mg%). Inorganic phosphorus was 2.2 mg%. The serum albumin was 2.8 gm%. The alkaline phosphatase was 315 international units. Subsequent biochemical studies showed the BUN and creatinine to be within normal limits. The tubular renal phosphorus clearance was 44% (normal, approximately 82%).

Serum electrophoresis showed no abnormal spikes but confirmed slight hypoalbuminemia. Alpha 1, alpha 2, beta and gamma globulins were within normal limits. Serum protein immunodiffusion showed the IgA to be elevated to 630 mg% (normal, 60 mg-330 mg). The IgG and IgM were within the limits of normal.

Bence Jones protein could not be demonstrated in the urine, but urine protein electrophoresis showed an abnormal spike ascribed to decomposed protein. Immunodiffusion of urinary protein disclosed only the presence of lambda chains. Kappa chains and IgD were not found.

Radiological Study: The bones were markedly deossified. There were lytic lesions in the pelvis

This is the third in a series of articles presenting unusual radiologic problem cases which the authors believe will be both interesting and educational for the practicing physician. Drs. Rubin, Lambie and Herman are from the Department of Radiology, Menorah Medical Center. They were assisted by Hal Marshall, M.D., pathologist.

(Fig. 1), most marked in the left iliac wing and in the right femur and acetabulum. The inner border of the right acetabulum was destroyed. There was effacement of normal bone structure in the pubic regions.



Fig. 1 There is marked deossification of the pelvis. Large lytic areas of radiolucent cystic change are evident in the left iliac wing. The right acetabulum is destroyed along the superior border. There is loss of bone substance in the right ischium and lytic areas in the femurs.



Fig. 2 The lumbar spine reveals areas of demineralization. There are some areas of increased density, particularly along the superior and inferior margins of the third lumbar centrum.

Esophagus was normal, but the stomach examination revealed an old duodenal deformity. An intravenous pyelogram demonstrated faint excretion with an opaque stone in the left lower calyceal region.

The lumbar spine (Fig. 2) revealed a generalized demineralization with some spotty areas of sclerosis.

The skull (Fig. 3) demonstrated multiple punched-out areas of varying sizes. In addition, there was a general demineralization of the calvarium.



Fig. 3 The calvarium is demineralized and contains multiple lytic areas of varying size. The sella is slightly large in the vertical diameter, but there is no bone destruction of the clinoids.

Differential Diagnosis:

1. Multiple myeloma.
2. Hyperparathyroidism (primary or secondary?).
3. Metastatic disease.

Radiological Diagnosis: In the absence of the clinical laboratory findings, the suggested diagnosis was myeloma. This diagnosis preceded the sternal aspiration of marrow which subsequently favored a dysgammaglobulinemia.

With discussion of findings of the hypercalcemia and hypophosphatemia and particularly the TPR rate, radiographs were made of the hands (Fig. 4). This film revealed marked demineralization of the bones. There was no suggestion of arthritis. The significant roentgen finding was that of subperiosteal resorption of bone, most marked on the radial aspect of the midphalangeal bones.

The changes observed in the hand prompted a presumptive diagnosis of hyperparathyroidism. Subperiosteal resorption of bone occurs both in primary and secondary hyperparathyroidism. The alterations in the skull and axial skeleton



Fig. 4 The hands demonstrate the loss of bone substance about the mid-phalangeal region, particularly on the radial side where there is resorption of bone and a loss of the distinct cortex.

were nonspecific and occur in metastatic disease as well as myeloma. While the punched-out areas would favor myeloma, an elevated alkaline phosphatase is rarely seen in myeloma

since this is purely a lytic process without bone production. The serum and urinary electrophoresis also exclude myeloma.

The urinary studies also exclude secondary hyperparathyroidism which is secondary to phosphate retention caused by renal impairment. The most significant laboratory findings are the hyperphosphaturia and hypophosphatemia with hypercalcemia. Increased hydroxyprolines may be found in the urine and reflect the collagen tissue disintegration. The hydroxyprolines measured 90 mg/24 hrs (normal, 15-60/24 hrs).

Surgical Pathology Report: Three parathyroid glands were removed, two weighing 125 mg and one weighing 247 mg. The lobulated encapsulated mass of parathyroid tissue consists of cells showing a variation nuclear size and staining ability. No evidence of invasion.

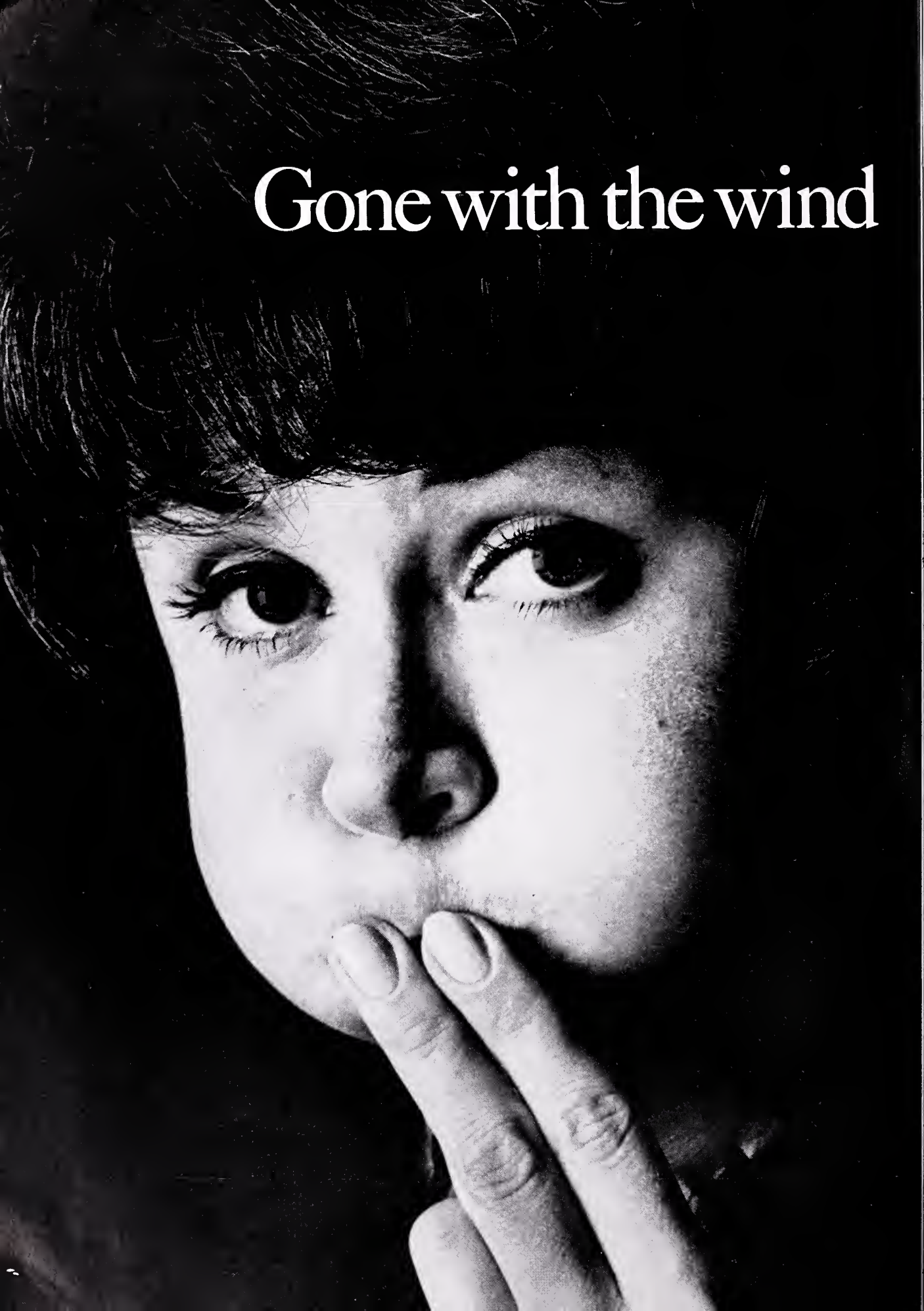
Pathological Diagnosis:

1. Parathyroid adenoma of substernal region.
2. Hyperplasia of two parathyroid glands.

Continuing Education Coming Events

- | | |
|-------------|--|
| March 8-10 | Pediatrics
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| March 10-11 | Drug Therapy
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| March 26-27 | 23rd Annual Midwest Cancer Conference
Broadview Hotel, Wichita, Kan.
AAGP Credit |
| April 5-7 | Ophthalmology: Recent Advances in Medical and Neurophthalmology
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| April 7-8 | Urology Seminar
M.U. Medical Center and Extension Division and Kansas City General Hospital
Plaza Motel, 47th & Main, Kansas City |
| April 12-14 | Anesthesiology
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| April 26-30 | Pediatric Radiology
Continuing Medical Education, M.U. School of Medicine,
Children's Mercy Hospital, Kansas City |

Gone with the wind



President's Message

YOU MISSED A GOOD PARTY!

An enjoyable and informative weekend of January 30 and 31 was a "red letter occasion" for approximately 60 members of the Missouri State Medical Association who attended our Fourth Annual County Society Officers' Conference. The officers and staff of your association regret that more physicians could not have heard these discussions.

Members of our state organization, as always, had key roles in the conference and presented excellent discussions regarding programs of our profession in Missouri. All member-participants are to be congratulated on a job well done!

One of the highlights of the meeting was a panel presentation featuring three newspaper representatives—Miss Sue Ann Wood of the *St. Louis Globe-Democrat*, Mr. Jac Zimmerman of the *Bolivar Herald-Free Press* and Mr. Don Stimble of the *Fulton Sun-Gazette*. All three stressed the theme that it is certainly up to the medical profession to take the initiative in calling attention to its own good works and programs through the use of the news media and television.

One speaker stated, "The medical profession once was able to remain in the background in American life, but the federal programs and other changes in recent years have made the profession highly visible and you doctors must take advantage of this visibility by making your good works known."

Down through the years, we of the profession have been somewhat "hamstrung" by fear of violating our code of ethics. Today's circumstances necessitate a new look at our stand in this regard for in order to favorably influence public opinion, we must become more visible and continue to stress our "good deeds."

I urge all county societies in Missouri to take the initiative in establishing contacts with local news medium—not only the press but also radio and television personnel.

Richard Wilbur, M.D., Deputy Executive Vice-President of the American Medical Association, gave a most informative presentation stressing many important aspects of the AMA as well as important programs they are beginning to undertake in order to improve the "image" of the profession. Among other things, he emphasized the importance of medicine being unified in these days of problems and pointed out that the American Medical Association is the most important unifying organization of our profession. In order that the AMA can better represent our profession, it needs a greater input from all of the M.D.'s of this nation.

Mr. Jim Foristel, Director of Congressional Relations for the AMA in Washington, D. C., reported on the situation in Washington. Jim, a native Missourian, has a vested interest in the welfare of Missouri medicine and has been very faithful about appearing on Missouri programs so that we may be kept informed. One disturbing piece of information he gave us was that many of the organizations at the national level, which favor national health legislation, are banding together to promote an all-out offensive to place the government in complete control of the health care of all Americans.

The presentations of Doctor Wilbur and Jim Foristel make it quite evident that we of the profession must stand solidly together if we are to work in the best interests of our profession and the health care of all Americans.

Their discussions also made it quite apparent that if we do stand solidly together, become actively involved and participate to our fullest in medical politics (that dirty word) we can materially shape and influence our future destiny. If we turn our backs and wash our hands of the present problems that confront us, they shudder to think what other people, who are willing to assume these responsibilities, will do to the medical heritage we leave to the next generation.

I hope to see *you* at the County Society Officers' Conference next year!



Joseph L. Fisher, M.D.

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INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with

withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly in-

crease hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

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on April 15-18, 1971
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Doctor, will you please write your wife's name on the above invitation and present it to her today?

You will remember my reporting in previous articles that only 1,800 Missouri physicians' wives belong to the Woman's Auxiliary. It is my hope that you, personally, will deliver this special invitation to our other 1,200 prospective members for me.

The emphasis of our Convention is always on friendly hospitality for every doctor's wife, whether or not she is an Auxiliary member. We try to provide the opportunity for making new friends, enjoying a delightful change of pace and learning about Auxiliary projects and goals. It is our belief that if your wife will attend one state meeting, she will become interested in the important work we are doing.

It is my earnest hope that you will urge *your* wife to join us this year as a member-at-large or as a member of your organized county Auxiliary if you expect to show your individual communities that you are genuinely concerned with their health and medical problems. Through her Auxiliary activities, your active, well-informed wife will reach people you can never reach. Help us in our effort to help her to be your best public relations representative.

Will I have the pleasure of meeting your wife at the Convention in April? I sincerely hope so!



**Mrs. William M. Walker
President**

EDITORIALS

ENJOY IT WHILE YOU'RE YOUNG

In his book, *The Affluent Society*, John Kenneth Galbraith opines that the importance of what is spoken depends not so much on what is said, but who is saying it. This apparently holds true whether it is our President justifying a course in Viet Nam or a labor leader asking for broader and less expensive (directly) medical care.

What finally brings change in society is that circumstances change and new voices are heard. These new voices espouse a position on which they soon are authorities and they are listened to until the circumstances change again and their cause is obsolete. The difficulty lies in the fact that once a person becomes expert by virtue of taking a stand, he can change his stand only with great difficulty, regardless of circumstances.

One wonders whether our system of medical

organization can ever hope to lead a change in the structuring of health care delivery. Our AMA House of Delegates is made up largely of members who have rendered years of dedicated service to their communities and to medicine. By the time they are elected to the House, the causes for which they stand are sometimes out of date. Nevertheless they are speaking for all of us.

It will be in the best interest of medicine and the public for all of our members, particularly younger physicians, to volunteer for committee and other assignments in the County society. We cannot afford to overlook fresh contributions from energetic sources.

ANDREW McCANSE

The Greater Kansas City Medical Bulletin

TRUE GREATNESS

The times cry out for simple virtues. Homely words describing homely situations are of higher value than the sharpest rhetoric.

The following thoughts came not from our Mrs. Wiggs but from a "Cabbage Patch" across the sea and were written down by a preteen girl in answer to her assignment to write on "True Greatness."

A person can never get true greatness by trying for it. You can get it when you are not looking for it. It is nice to have good clothes. It makes it a lot easier to act decent, but it is a sign of true greatness to act when you have not got them just as good as if you had.

One time when Ma was a little girl they had a bird

at their house called Bill that broke his leg. They thought they would have to kill him but next morning they found him propped up sort of sideways on his good leg, singing. That was true greatness.

Once there was a woman that had done a big washing and hung it on a line. The line broke and let it all down in the mud but she didn't say a word. She did it all over again, and this time she spread it on the grass where it couldn't fall. But that night a dog with dirty feet ran over it. When she saw what was done she sat down and did not cry a bit. All she said was, "Ain't it queer that he didn't miss nothing." That was true greatness, but it is only people who have done washing that know it.

New York State Journal of Medicine

IMPROVED ACCIDENT & HEALTH PROGRAMS

The Disability Income Policy sponsored by the Missouri State Medical Association since 1943 has now been made **GUARANTEED RENEWABLE** and income benefits are available up to \$300.00 weekly to members under age 56 subject to acceptance by the Company.

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COMMENT . . .

Our Readers Write

Missouri State Medical Association
Jefferson City, Mo.

Dear Missouri Physicians:

As physicians, you are aware of the importance of having capable medical assistants in your office. The more competent assistant saves your valuable time and helps you give better service to your patients.

The primary interest and purpose of the American Association of Medical Assistants is to help the medical assistant to increase her knowledge and become a better assistant for you and your patients.

AAMA was organized in 1956 for the educational, fellowship, social and civic opportunities it offers to its members. Our association can and does benefit the members of the medical profession, their patients and the community in which a chapter is located. Meetings are for the exchange of ideas of office procedures and for hearing educational and stimulating talks by physicians from the various fields of medicine, as well as for affording an opportunity for your employees to hear outstanding speakers from your community and the state. We believe that better-trained assistants can assume more responsibility toward maintaining smoothly running offices.

Our association is a nonprofit organization. It is not, nor shall it ever become, a trade union or collective bargaining agency. We have the wholehearted approval of the American Medical Association plus cooperation and assistance from state and county medical societies. Our county, state and national associations have Advisory Committees composed of physicians to give advice, counsel and guidance.

We have a singularly attractive, comprehensive group insurance plan for our members with salary replacement and major hospital and nurse, surgical and medical coverage. This is the only such plan available to medical assistants.

Our state convention will be at the Stauffer's Inn in St. Louis on April 16-17. There will be educational programs, and all medical assistants are invited.

May we enlist your cooperation in our plans to extend this program to your area? Your interest in helping improve the quality of work done by medical assistants would merit our most sincere appreciation.

Respectfully yours,

Blanche E. Owen, R.N.

Chairman, Public Relations

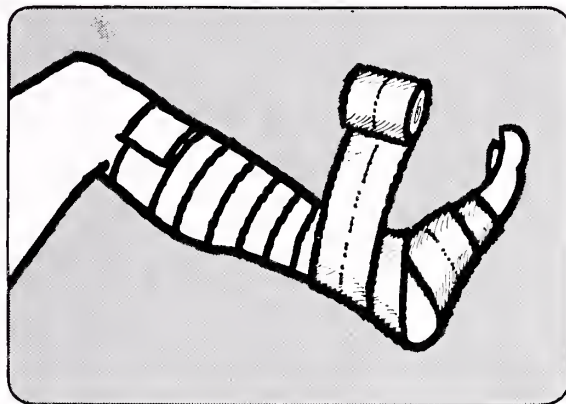
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American Association of Medical Assistants

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County Society News

FIRST DISTRICT

COUNCILOR

JOHN N. MARTIN, M.D., ST. JOSEPH

BUCHANAN COUNTY MEDICAL SOCIETY

The annual "Heart" meeting of the Buchanan County Medical Society followed a dinner at Hotel Robidoux in St. Joseph on February 3. The meeting program was sponsored by the St. Joseph Division of the Missouri Heart Association.

Dr. Brent M. Parker, president of the Missouri Heart Association, was the guest speaker for the event. An Associate Professor of Medicine at Washington University School of Medicine, Doctor Parker presented a paper on "Pitfalls in the Diagnosis of Coronary Artery Disease."

Doctor Parker was introduced by Dr. William H. Ames of St. Joseph, president-elect of the Missouri Heart Association. Dr. Sharon E. Waggoner presided.

Arrangements for the meeting were made by the Society's Program Committee of which Dr. Richard O. Craig is Chairman and Drs. Martin J. Fischer and Gerald E. Fox are members.

Prior to the program, Dr. H. E. Petersen and Attorney J. William Roberts discussed a forthcoming school bond election for St. Joseph. The proposal was unanimously endorsed by the members present.

RANDAL W. WEED, M.D., *Secretary*

CLAY COUNTY MEDICAL SOCIETY

Dr. Donald Kuenzi of Kansas City has been elected President of the Clay County Medical Association for 1971, assuming the position formerly held by Dr. Richard Bowles of Liberty.

The first meeting of the year was held on January 26 at Fireside Inn with Dr. Richardson Noback, dean of the University of Missouri School of Medicine in Kansas City, as speaker. Doctor Noback discussed details of the development of the new Kansas City medical school.

Elected to serve with Doctor Kuenzi are Drs. Paul Revare, Kansas City, President-Elect; Daniel Boone, Kansas City, Vice-President; Felix Pileggi, Kansas City, Secretary-Treasurer; Robert Gauer, Kansas City, and Richard Hedges, Excelsior Springs, members of the Executive

Board; and Phillip King, Liberty, who will serve on the Board of Censors for a three-year term.

FELIX PILEGGI, M.D., *Secretary*

GRAND RIVER MEDICAL SOCIETY

Twenty-six members of the Medical Society and the Ladies Auxiliary braved the cold Chillicothe weather to meet at the Strand Hotel on Jan. 14, 1971.

Following the usual social hour and dinner, those present were privileged to hear a book review by Mrs. Joseph Miquelon of Chillicothe. The book, "Come Let Us Play God" by Dr. Leroy Augestein, presented many ecological questions.

Dr. Donald Dowell, Chillicothe, presented a President's Plaque to Dr. B. D. Howell, Brookfield, for his service in 1970.

The following Delegates and their Alternates were elected for the 1971 MSMA Annual Session: Caldwell County—Frank R. Daley, Hamilton, and George Mandler, Chillicothe; Carroll County—John H. Platz, Carrollton, and Erroll W. Allen, Carrollton; Davies County—J. Larry Dowell, Pattonsburg, and Ralph W. Bohnsack, Brookfield; DeKalb County—Eugene L. Bales, Carrollton, and Billy D. Howell, Brookfield; Grundy County—Albert D. Cross, Trenton, and William A. Fuson, Trenton; Harrison County—Merriam Gearhart, Bethany, and Willard Ellsworth, Cainesville; Linn County—John R. Dixon, Brookfield, and Robert W. Smith, Marceline; Livingston County—Joseph Conrad, Chillicothe, and William L. Fair, Chillicothe; Mercer County—Windsor B. Atcheson, Trenton, and Oliver F. Duffy, Trenton.

A letter from the MSMA was read requesting that all members attend the Fourth Annual County Society Officers Conference of the MSMA to be held on January 30-31 at the Ramada Inn in Jefferson City. It was emphasized that the meeting is not for officers only.

It was moved by Doctor Dowell, seconded by Doctor Allen and passed that the Society again accept the invitation of the Buchanan County Medical Society to join in a hospitality suite at the MSMA Annual Session on April 15-18.

A communication from the Speaker of the House of Delegates of the Missouri State Medical Association was read concerning the introduction of resolutions at the coming Annual

Session. He requested that any Society member wishing to introduce a resolution this year send it with explanatory material to the MSMA Headquarters Office no later than February 20.

The meeting was adjourned.

FRANK R. DALEY, M.D., *Secretary*

FOURTH DISTRICT

COUNCILOR

ROBERT A. MAYER, M.D., ST. LOUIS
COUNTY

ST. LOUIS COUNTY MEDICAL SOCIETY

Dr. Falls B. Hershey, a vascular surgeon, was installed as President of the St. Louis County Medical Society in ceremonies at LeChateau on January 22.

Other officers installed at the same meeting were Drs. Jack R. Eidelman, President-Elect; Robert H. Lund, Vice-President; and Frederick D. Peterson, Treasurer. Four members of the Council who were installed are Drs. Allen P. Klippel, John M. Laird, Morris D. Marcus and Miles C. Whitener.

FIFTH DISTRICT

COUNCILOR

JAMES C. COPE, M.D., COLUMBIA

BOONE COUNTY MEDICAL SOCIETY

The Boone County Medical Society met on January 5 at Boone County Hospital. The meeting was called to order by President Roger Bumgarner.

The minutes of the last meeting were read by Secretary William R. Bynum and were approved.

After a discussion regarding the progress of the Diabetes Detection Program, Dr. William Allen said a report will be made later.

President Bumgarner instructed Dr. George Fuchs to appoint and contact members of his Committee on Public Relations and to proceed with plans regarding the Columbia Chapter of Zero Population Growth.

Dr. Fuchs moved that a plaque and certificate of appreciation be presented to each president of Boone County Society heretofore, retroactive to 1970. After a discussion, it was decided that a plaque and certificate be presented to all past-presidents who are still members of the Society. The motion was seconded and passed.

It was announced that the annual dinner meeting of Doctors and Lawyers will be held in June. Dr. William Bynum will make the arrangements.

Doctor Bumgarner read a letter addressed to Dr. Henry M. Hardwicke from the United Cerebral Palsy Association requesting support in making rubella vaccine a compulsory immunization. Doctor Hardwicke stated that he will check with the pediatricians in the Society regarding their views.

Dr. Bumgarner then read a letter from the Missouri State Medical Association regarding resolutions to be submitted for the 113th Annual Session.

There being no further business, the meeting was adjourned at 9:10 PM.

WILLIAM R. BYNUM, M.D., *Secretary*

NINTH DISTRICT

COUNCILOR

E. A. STRICKER, M.D., ST. JAMES

SOUTH CENTRAL COUNTIES MEDICAL SOCIETY

The South Central Counties Medical Society meet on January 27 at Piney Inn in Houston. Hosts for the evening were Dr. and Mrs. William F. Dreyer of Houston.

Members present were Dr. and Mrs. R. W. Denney, Mountain Grove; Dr. and Mrs. M. L. Fowler, West Plains; Dr. and Mrs. R. H. Smith, West Plains; Dr. and Mrs. Joe Wall, Houston; Dr. and Mrs. Amos Coffee, Willow Springs; Dr. Joe Spears, Cabool; and Dr. Jack Wiles, West Plains.

Following the dinner, the ladies retired to the home of Mrs. Dreyer.

Dr. Phillip Carr, Dr. Charles Leagus and Dr. Frank Sundstrom of the Smith Glynn Callaway Clinie of Springfield presented a lecture, slide presentation and film on "Coronary Angiography and Heart Surgery."

JACK N. WILES, M.D., *Secretary*



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Statement From American College of Surgeons

The Regents of the American College of Surgeons feel obligated to inform the public that the rising number of lawsuits against physicians is seriously threatening the quality of surgical care and increasing its cost to patients, according to a statement released recently by C. Rollins Hanlon, M.D., Director.

Some surgeons feel compelled to treat patients under a concept which stresses avoidance of litigation rather than the application of their best clinical judgment.

Instead of attempting procedures which may cure the patient but have a higher risk of failure and exposure to the threat of a lawsuit, some surgeons may prefer to use standard, proved, conservative methods which might bring relief to the patient but will not cure him.

The rash of lawsuits has driven many other surgeons to still another extreme. To protect themselves against possible litigation, they are being forced to order costly tests and elaborate x-rays which under normal conditions would not be required.

It is not generally appreciated by the public that hazards are inherent even in well established surgical procedures. The practice of medicine is a combination of art and science. Even through medicine as a science is highly

advanced, a precise result in treatment never can be guaranteed. Although the physician may demonstrate the highest possible knowledge and skill so that a jury would not be expected to find fault with his actions, it still might find against the doctor, simply because the doctor has insurance and the patient had a bad result.

To protect himself against unexpected litigation, a surgeon, like an automobile driver, must have adequate liability insurance. Because insurance companies are being required to pay out larger and larger compensation, they are finding it necessary to raise their premiums for doctors. Several insurance companies have ceased to issue professional liability insurance. In Hawaii, as well as in certain southwestern and western states, many surgeons are faced with nonrenewal of their policies even though they never have been involved in any medico-legal action. This may force some surgeons to give up their practice, thereby aggravating the problem of an already deficient supply of physicians.

The Regents of the American College of Surgeons believe the problem extends beyond the profession and requires increased public awareness for its solution.

National Congress on Socio-Economics to Be Held at Caesars Palace on April 2-3

The Fifth National Congress on the Socio-Economics of Health Care will be held at Caesars Palace in Las Vegas on April 2-3.

The meeting will be sponsored by the Council on Medical Service, Division of Medical Practice, American Medical Association.

Goal of the 1971 Conference will be to explore existing projects and programs designed to improve physician productivity and promote efficiency in the health care system by examining foundations for medical care, their concepts and operation and by investigating electronic

data processing applications to the economics of health care.

The Conference also will identify the status of federal legislation and its potential impact on the organization, financing and delivery of health services.

Advance registration should be addressed to the Secretary, Council on Medical Service, American Medical Association, 535 N. Dearborn, Chicago, Ill. 60610. There is no registration fee.

Room and suite registrations should be made directly with Caesars Palace, 3570 Las Vegas Blvd., South Las Vegas, Nev. 89109.

Council Report

(Continued from page 158)

that the Board of Curators approved his recommendations of the manner in which a cut of \$2.2 million will be made out of the Medical Center budget. A summary of actions proposed in the resolution of the budget deficit was distributed to the Council. Dr. Mayer indicated that the Division of Welfare is now paying the University on an actual cost basis for Medicaid patients. He further stated that in order to increase income, there will be a change in admission of patients on the basis of ability to pay. Admission will no longer be made simply on the basis of whether the care is a component of the educational program, but an added fiscal consideration also will have to be made. He asked that the physicians try to be helpful in this matter.

Dr. Mayer stated that he would appreciate physicians' support on the proposed Outpatient Clinic-School of Nursing Building at the University of Missouri-Columbia Medical Center. Material was distributed regarding this proposed building project.

Dr. Robert Felix expressed the appreciation of the St. Louis University Medical School to the officers and staff of the St. Louis City and St. Louis County Medical Societies for their support and assistance to the Medical School. He indicated that the Medical School has received a grant and the construction program is underway. Dr. Felix stated that there is much pressure for increased enrollment in the medical schools. He indicated that they are trying to teach the students something about community responsibility and some are now looking into the problem of lead poisoning in the ghetto areas.

He reported that they have been given an unqualified accreditation for the next seven years, which is the limit on accreditation.

He stated that he has appointed a Committee on the Role of the Basic Sciences to study what knowledge the students bring with them to Medical School, etc.

Dr. Noback, dean of the University of Missouri-Kansas City Medical School, stated that the University administration has been given to understand that if additional taxes are forthcoming, the University can expect to have increased appropriations and will be able to get the new school started in Kansas City. He indicated that he has received a tremendous amount of support and understanding from the physicians and is hopeful that this new school can help to alleviate the doctor shortage problems in the State.

MAJOR HOSPITAL-NURSE EXPENSE PROGRAM

Mr. Arthur Humphrey of Eggert-Carroll-Schroeder Agency, Inc. stated that about a year ago the Council approved their Guaranteed Renewable Plan which resulted in a number of new enrollments in the program. Mr. Humphrey demonstrated that during the past three years claims paid or in the process of payment have exceeded premiums received. He presented to the Council a revised rate schedule for the Association's Major Hospital-Nurse Expense Program for members of MSMA and asked for the Council's approval. He further stated that as the performance of this program during the past several years has demonstrated, it would be in the interest of insured members participating in this program, to establish hereafter a practice of review at least every two years. Mr. Humphrey stated that he was seeking approv-

al of the revised premium schedule and that they desire to put it into effect April 1, 1971. After brief discussion, it was moved and seconded that the revised premium rate schedule be approved to become effective April 1, 1971. Motion carried.

RECENT ACTIONS OF THE STATE BOARD OF HEALTH

Dr. Bradshaw discussed some recent actions of the State Board of Health. He reported that Dr. Herbert Domke has been named the Acting Director of the Missouri Division of Health effective Dec. 30, 1970.

Dr. Bradshaw said that the Board of Health has proposed legislation to be brought before the Legislature regarding treatment of minors without parental consent and stated that the Board was seeking the reaction of the Council in regard to this proposed legislation. He stated that this deals with treatment of minors with VD, care of drug abusers, etc. Dr. Bradshaw stated that it is a broader scope of legislation than would appear on the surface. He indicated that no minimum age is stated in the proposed legislation.

After brief discussion, the Chairman referred this portion of Dr. Bradshaw's report to the Legislative Committee for study and recommendation back to the State Board of Health. Motion carried.

Dr. Bradshaw indicated that the Governor's Advisory Council on Comprehensive Health Planning, of which Dr. Robert Kelley is a member, recommended the establishment of a state center for health statistics and further recommended that this matter be investigated by the State Board of Health. On November 20, at a meeting of the Board of Health, they charged their central office staff with (1) ways for funding the development of this center; (2) if funding can be obtained, presenting a plan for the initiation of this state center; (3) investigating the appointment of an Advisory Board for Health Statistics and to recommend people from various organizations and associations to serve on this Advisory Board. Dr. Bradshaw pointed out that the central office staff of the Division of Health could make recommendations to the Advisory Board, but the appointments would be made by the State Board of Health.

Dr. Bradshaw stated that he brought this matter before the Council for their information and, secondly, for recommendations that they wish to make regarding appointments to the Advisory Board to help set up the guidelines for the state center for health statistical accumulation.

The Chairman referred this portion of Dr. Bradshaw's report to the Commission on Public Affairs with a recommendation that they appoint an Ad Hoc Committee for this special project.

Dr. Bradshaw then discussed the endorsement of the State Board of Health for private medical schools state financial assistance. He indicated that the Board endorsed the financial assistance to the private medical and osteopathic schools of Missouri to stabilize present enrollment, to help provide support and incentive to increase the enrollment. He stated that he felt the endorsement given did not particularly have in mind any priorities, but simply recognizes need and with this need in mind endorsed the program.

Dr. Bradshaw then called on Dr. George Thoma, Assistant Vice President of St. Louis University, to further

present the proposal of the private medical schools.

Dr. Thoma stated that their proposal was to try to stabilize the current source of physicians and to increase the enrollment. He further stated that private schools are in fiscal difficulties as are all other schools. The proposed bill, which will be introduced in January, indicates that the state will contract with the private medical schools for Missouri residents for their education at the rate of \$4,000 a year, in return for which the schools shall reduce their tuition to Missouri residents. The ultimate goal is to try to increase the medical school enrollment in the private schools by 100 students. Dr. Thoma indicated that they did not wish to be in competition with the University of Missouri or the new Medical School at Kansas City for state funds, but felt that if tax dollars are forthcoming, they would like to be able to go to the Legislature and say that organized medicine is behind their attempts to increase the health manpower source through the private sector of the state.

Discussion followed regarding tax dollars and priorities as far as medical education is concerned. It was pointed out that, perhaps, a proposal of this type to the Legislature should be accompanied by a suggested method for financing. It also was mentioned that perhaps a proposal such as this would open the door to every institution in the state that does not have a tax subsidy to approach the Legislature for financial support.

After further discussion, motion was made and seconded that the portion of Dr. Bradshaw's report regarding the private medical schools state contract proposal be referred to the Commission on Continuing Education and Health Manpower.

On motion by Dr. Fisher, duly seconded, Dr. Bradshaw's report was accepted with commendation.

REPORT OF AMA DELEGATES

Dr. Benoit gave a rundown on the AMA Clinical Convention held in Boston November 29-December 2. He stated that the House approved the proposal to provide for House jurisdiction over dues. The Reference Committee that reviewed this particular matter will have a meeting and airing of the budget before the House convenes next summer.

The Board of Trustees will continue to try to develop a national professional liability insurance program. The House approved the Board report announcing withdrawal of CNA Insurance from negotiations with AMA. They also urged each state association to seek enactment of state legislation "to provide a reasonable degree of certainty in the law and objectivity in the judicial process through which malpractice claims are determined."

The American Hospital Association is studying a proposal for a system of health care corporations that would deliver comprehensive care by geographic regions throughout the country. The AMA House called for study of this proposal by the Board and for a report to be submitted to the membership and to state medical societies.

Regarding Peer Review, the House reaffirmed its approval of peer review organization, the plan presented in AMA's Mediredit proposal. It also approved the action taken by the Board in opposition to the Professional Standards Review Organization proposal (Bennett Amendment). The Reference Committee considering peer review reported the following changes in the original amendment which became available during the convention: (1) Deletion of the requirement of federal ownership of files; (2) Deletion of the \$5,000 fine; (3) Elimination of national norms; (4) Elimination of the requirement for preadmission approval for elective procedures. Dr. Benoit stated that the Health Care Foundation approach on peer review, which Missouri has taken, should be acceptable.

Dr. Benoit indicated that discussion was held and actions taken regarding liability in blood transfusions; reaffirmation of the AMA's policy on abortion; retention of the present method of electing trustees to fill specific vacancies. Dr. Washburn stated that the House has gone on record as approving the new five-digit current procedural terminology and urged that it be used.

REPORT OF AD HOC COMMITTEE ON ENVIRONMENTAL HEALTH

Dr. Neilson reported that a Subcommittee on Air Pollution met on Nov. 23, 1970 at the St. Louis Medical Society with Dr. Neilson chairing the meeting.

He stated that Dr. Theodore Sterling has worked this summer on data on the athletic performance of school children as a measure of effects of air pollution. The Committee felt that it would be feasible to carry out a further investigation utilizing lung and upper respiratory patients and correlating the state of their condition with data from Air Pollution Control Centers. Questionnaires will be used in order that results can be computerized.

Dr. Neilson indicated that the Woman's Auxiliary to the MSMA has been in touch with the Committee on numerous occasions regarding their environmental program and has been in touch with the AMA Council on Environmental and Public Health which has helped them plan for their Environmental Health Project over 1970-1971. He reported that the Auxiliary had voted to expend \$200 of its own money and has asked the MSMA for an additional \$350 to cover all other costs of their Environmental Health Package Program.

At this time, the Chairman called for a motion regarding the request for \$350. Motion was made and seconded that the MSMA approve the Auxiliary request for \$350 for its Environmental Health Program. Motion carried.

Dr. Neilson stated that he had been appointed to the ARCH Environmental Planning Board. This agency is under the Comprehensive Health Planning Act.

Dr. Neilson stated that a meeting with Governor Hearnes would be held on December 16 for formal presentation of the results and conclusions of the Governor's Conference on Environmental Affairs. The report is dedicated to the late Mayor Raymond Tucker of St. Louis, recently deceased.

Dr. Neilson said that at the recent AMA meeting, the Missouri Delegation began to actively campaign for Dr. Benoit for a place on the Council on Medical Service. He requested that the MSMA Council write to Dr. Howard of the AMA urging the Board of Trustees to submit Dr. Benoit's name in nomination for the Council on Medical Service to the AMA House of Delegates.

On motion of Dr. Matthews, seconded by Dr. McAlhany, it was agreed a letter would be sent to Dr. Howard.

Motion was made and seconded that the report of the Ad Hoc Committee on Environmental Health be approved. Motion carried.

REPORT OF AD HOC COMMITTEE ON CONTINUING MEDICAL EDUCATION

Dr. Young, Chairman of the Ad Hoc Committee on Continuing Medical Education, reported that the Com-

mittee met on Nov. 22, 1970 to discuss several items which had been referred to this committee. He stated that he also attended a liaison committee meeting with the Osteopathic Association to discuss mutual problems. He said the Committee discussed the Hospital Emergency Physician Call Roster problem in detail and felt that solutions could be found only at the local level and should be studied jointly by each hospital medical staff and administrative officials. The Committee recommended contact with the AMA requesting literature available which is pertinent to this situation.

Dr. Young said that the Committee also discussed implementation of the SAMA Summer Job Program. He stated that the Committee on Continuing Medical Education should have some voice in the selection of hospitals and that the Council or Councilor in a particular area should review these hospitals to be sure the student will receive a gainful experience. He stated the Osteopathic Association had approved this program.

Dr. William Mayer of the University of Missouri stated that hospitals could not take medical students without the approval of their medical schools and that the medical students should be assigned to a physician instead of the hospital. Dr. Young stated that a given physician must be assigned to each of these students.

After further discussion, on motion of Dr. Miller, duly seconded, it was agreed to approve this portion of Dr. Young's report with the requirement that some type of communication between the students involved be made the responsibility of the Committee on Continuing Medical Education.

Dr. Young stated that he had attended a recent meeting on Continuing Medical Education in Chicago, which was sponsored by the AMA. He said there was a discussion regarding compulsory continuing medical education in order to maintain membership in a state medical association and, also, a requirement of a minimum amount of education for licensure in the state. He stated that these matters are being considered in relationship to continuing medical education across the country. More and more states are going to the compulsory status including Oregon, Arizona and Pennsylvania, with California moving in that direction.

Dr. Young then called attention to a proposed two-phase approach to the development of effective continuing education of physicians in the state of Missouri. Phase I—To develop workshops through component districts and local societies which will result in training physicians to identify educational needs. He stated that time and money would be needed and administration under the Commission on Continuing Education and Health Manpower and MSMA staff, with preparation to begin in 1971.

Phase II—It was suggested (a) to use the Peer Review System to aid in identifying educational needs and compare local standards of care with statewide standards; (b) to centralize information gathered by Peer Review relating to quality of care; (c) to evaluate the effect of the educational programs; (d) to give teaching institutions objectives upon which they can develop effective educational programs. Administration is suggested in cooperation with the Health Care Foundation of Missouri, with funding through a number of suggested possibilities.

After further discussion, on motion of Dr. Miller, seconded by Dr. Franklin, the report of the Ad Hoc Committee on Continuing Medical Education was accepted

as amended, with special commendation to Dr. Young and his Committee for their efforts.

REPORT OF AD HOC COMMITTEE ON HEALTH MANPOWER

Dr. Worley, Chairman of the Ad Hoc Committee on Health Manpower, reviewed the minutes of the meeting held on October 18 in Jefferson City. He stated that the Committee had studied and discussed in detail the resolution referred to this committee by the MSMA House of Delegates regarding increasing health manpower in rural areas and to encourage the development of new programs to provide large numbers of family physicians. He said discussion included recruitment of students for all medical, paramedical and health careers; students to be approached, ranging from the seventh grade through the 12th grade; and participants representing the medical schools to cover related curriculum at the premedical level. Mr. Don Butzer of the Missouri Hospital Association explained recruiting for all medical and health careers funded by the MRMP and administered by the Missouri Hospital Association. He stated that funding was approved for a three-year period with invitations for financial assistance from all related health organizations. If the program is successful, it is hoped that hospitals in Missouri and other interested organizations will provide the funds to continue the recruiting program.

Dr. Worley stated that the Committee recommends that the Council approve endorsement of the health career recruiting program of the Missouri Hospital Association urging (1) that all physicians publicize and support the program at their respective local county medical society level and (2) that they participate when invited to serve as a speaker when the program is scheduled at local schools and hospitals and on related career day programs.

Dr. Worley stated that the Committee also studied the resolution referred to the committee by the House of Delegates regarding Diploma Nursing Education which states that the "MSMA take all appropriate steps to encourage recruitment, development and expansion of diploma nursing programs." The Committee recommends for Council approval (1) the need for nursing personnel at all levels is acute; (2) the need is not being met; (3) strong and effective action is necessary; and (4) support for all nursing education programs at every level.

After further discussion on motion of Dr. Matthews, duly seconded, the Council approved the report of the Ad Hoc Committee on Health Manpower.

PROPOSED PROGRAM FOR 1971 ANNUAL SESSION

Dr. McDonnell gave a brief report of the proposed program for the 1971 Annual Session and its progress to date. He stated the preliminary program was published in the December issue of MISSOURI MEDICINE. It was noted that several portions of the program were not finalized as yet, but work is progressing in that direction.

On motion, duly seconded, the report of the Program Committee was accepted.

AMA CONGRESS ON HEALTH MANPOWER

Dr. Noback gave a lengthy report on the meeting of the First Annual Congress on Health Manpower of the AMA which he attended in Chicago on Oct. 22-24, 1970 as a representative of MSMA and the new Kansas City Medical School. He stated that he had found the program to be extremely well organized, the participants in-

terested and sincere and the work worthwhile. He stated that he had served as moderator for one of the discussion groups. He said there were several of the discussion speakers who had very good points and, at the close of the meeting on Saturday morning, there was a summarization of the program from 19 different discussion groups. Dr. Noback gave a summary of some of the points in the overall papers and the major points reviewed. He mentioned that the proceedings would be published and thought it would be of interest when available.

After further discussion, on motion, duly seconded, the Council accepted the report of Dr. Noback.

REPORT ON LIAISON COMMITTEE OF MSMA, MAOPS AND BOARD OF HEALING ARTS

Dr. Fisher reported on the meeting of the Liaison Committee of MSMA, Missouri Osteopathic Association and the Missouri State Board of Registration for the Healing Arts, which was held on November 13.

He stated that the action of the MSMA House of Delegates at the 1970 Annual Session giving the position of the MSMA on abortion was discussed. It was reported that the House of Delegates of the Osteopathic Association had not taken similar action. It was agreed that the position of the associations should be made known to the legislators if a bill is introduced.

Dr. Fisher reported that blood as a service was discussed along with the Illinois Supreme Court case. It was agreed that a bill to remove the implied warranty from blood was urgently needed to protect hospitals and physicians from liability. A proposed draft of a bill prepared by the Missouri Hospital Association was discussed and it was understood that they will introduce the legislation. It was suggested that contact be made with the Hospital

Association. Both associations should support the bill.

Discussion regarding statute of limitations on malpractice was held. It was agreed that if a bill similar to the one introduced in the 75th General Assembly is introduced in the 1971 Missouri Legislature, that the associations should vigorously oppose them.

Dr. Fisher reported that the recent opinion of the Attorney General concerning the Chiropractic Practice Act was discussed. It was mentioned that in Kentucky, legislation had been introduced to place chiropractors under the Medical Practice Act. Dr. Fisher stated that considerable discussion was carried on regarding AMA position on Chiropractic and situations in other states.

Proposed changes, in the Medical Practice Act, as recommended by the Board of Healing Arts, were discussed. Dr. Kasten explained to the Committee the extra costs incurred in licensing the physical therapists and examining and licensing foreign medical graduates.

The "sick doctor" statute recently enacted in Florida was discussed by the Committee, and staff was directed to contact Florida for a copy of the statute and information on their experience to date.

Dr. Fisher stated that Dr. Paul Young discussed the work of his committee concerning postgraduate training as a requirement for association membership and licensure. He mentioned plans that have been developed by several states, but so far, he knows of no state that has this as a requirement for continued licensure. Dr. Young reported that the Health Care Foundation could identify educational needs and programs could be planned accordingly with area physicians. It is recommended that close liaison between the MSMA and the Osteopathic Association be maintained for continuing education.

Dr. Fisher reported that the Committee discussed the Missouri Professional Corporation Act. It was suggested that a bill be introduced to allow an osteopathic physician and a medical doctor to form a professional corporation. A bill has been drafted for introduction in the next session of the General Assembly.

REPORT OF THE LEGISLATIVE COMMITTEE

Dr. Matthews, Chairman of the Committee on Legislative Affairs, gave a brief rundown on anticipated and proposed legislation before the 76th General Assembly.

Dr. Matthews discussed possible chiropractic legislative proposals. He also indicated that a meeting will be held with the Hospital Association regarding a proposed blood bill. He further stated that they also would discuss possible or proposed legislation regarding treatment of minors without parental consent and protective legislation for physicians serving on peer review committees.

On motion, duly seconded, the report of the Legislative Committee was approved and accepted. Motion carried.

Dr. Cope brought up the problem of certain elective operations being considered criminal acts. He moved that Mr. Noble and the Legislative Committee be charged with drawing up legislation to be presented at the next Council meeting that would give an individual the right to undergo a surgical procedure for the purpose of altering his physiology or anatomy, even though the procedure is not directed at the treatment of disease, and the performance of such a procedure will not constitute a violation of the law by either the surgeon or the patient. Motion carried.

Dr. Miller indicated that a bill is in the process of being drafted in Kansas City regarding elective operations and that he hoped to have a copy of this prior to the next Council meeting.

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HEALTH CARE FOUNDATION

Dr. Miller suggested that the Council take action to eliminate the State Policy Coordinating Committee for Peer Review which was appointed by the Council, stating that the responsibility of this committee would now be under the Board of Directors of the Health Care Foundation and will hereafter be defined by the Constitution and Bylaws of that Foundation. On motion, duly seconded, the Council agreed to dissolve the State Policy Coordinating Committee.

Dr. Miller said that he feels the Health Care Foundation is coming along fine and generally meets the recommendations that the AMA has set forth. He thanked the Council for the \$5,000 grant to support it and indicated that the Osteopathic Association has given \$2,000; St. Louis Blue Shield, \$25,000; and Kansas City Blue Shield, \$15,000. Dr. Miller asked that the Council support, in a resolution to the House of Delegates, a \$10 per member assessment for one year for the continuing development of the Health Care Foundation. He stated that possible financial support would be forthcoming from Medicaid and HIC, but felt that this \$10 assessment was needed to accommodate the proposed budget of \$100,000. He further stated that it seemed likely that at the

end of 12 months, a cost analysis could be made to determine the per case cost.

After a brief discussion regarding such an assessment on the members, it was moved, seconded and agreed that this matter be tabled until the next Council meeting at which time it can be further considered.

PRESIDENT-ELECT

Dr. Miller introduced the subject of payment of the President-Elect's expenses to AMA meetings. Dr. Fisher said that the presidents and presidents-elect of State Associations do meet during the AMA meetings. On motion, duly seconded, it was agreed that the MSMA budget expenses for the President-Elect to the two yearly sessions of the AMA, the Annual and Clinical Sessions. Motion carried.

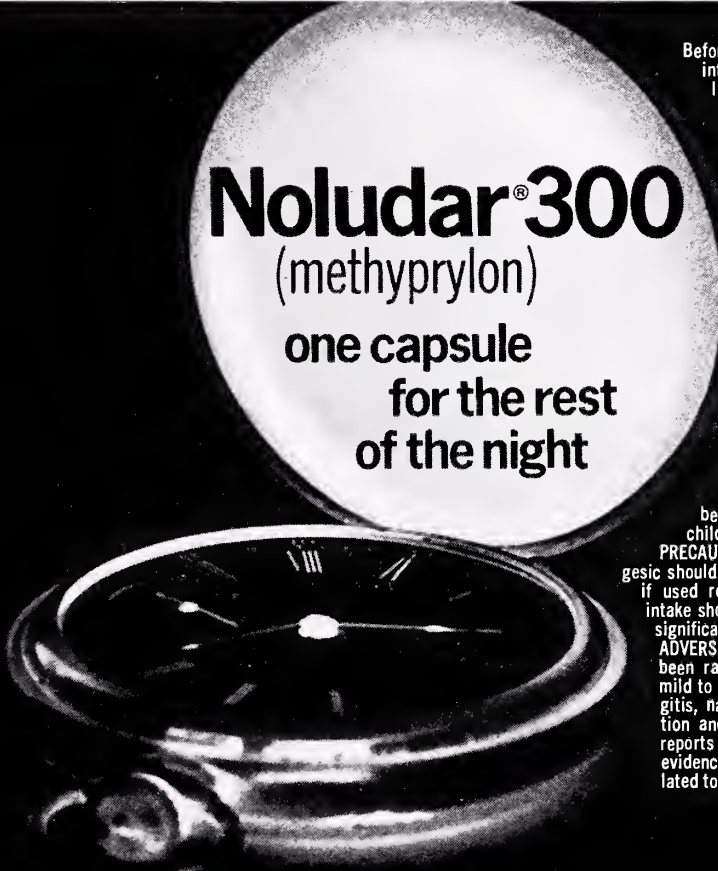
NEXT COUNCIL MEETING

Mr. McIntyre proposed that the next Council meeting be held on Friday, January 29, and Saturday morning, January 30. The Officers' Conference will follow on Saturday afternoon and Sunday, January 30 and 31. Both meetings are to be held at the Ramada Inn in Jefferson City. The proposal was approved. The meeting adjourned.

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April 15-18

Chase-Park Plaza Hotel



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INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of child-bearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

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FINANCIAL STATEMENT FOR THE YEAR 1970

LENNERTSON & COMPANY
CERTIFIED PUBLIC ACCOUNTANTS

ST. LOUIS, MISSOURI 63105

January 27, 1971

Missouri State Medical Association
515 East High Street
Jefferson City, Missouri 65101

Gentlemen:

The accounts of the Missouri State Medical Association, a non-profit Missouri corporation were reviewed for the year 1970, and a report thereon is presented together with the following exhibits:

Exhibit A	Balance Sheet
Exhibit B	Income Statement
Exhibit C-1	Statement of Commissions and Meeting Expenses
Exhibit C-2	Statement of Investments
Exhibit D	Dues Receivable and Memberships by Societies

It should be noted that members' dues and investment income are taken into income on the cash receipt basis whereas the other accounts are maintained on the accrual basis. Rentals received in advance for Annual Session exhibit space are shown as prepaid and carried forward to the year to which they apply.

Scope of Examination

The Balance Sheet at December 31, 1970 and the Income Statement for the year then ended were reviewed. Examinations or tests were made of the accounting records, in the manner and to the extent deemed appropriate, without making a detailed audit of the transactions.

Recorded cash receipts for the year were traced in total into the bank as deposits and disbursements for the period were substantiated by an inspection of paid checks, purchase invoices and other data on file.

Selective tests were made of the income and expense accounts for the period. It was noted that space in the Journal was contributed to the United States Treasury Department for bond advertising, to members for small classified ads, and to public service organizations.

Income Statement

The financial result of activities of the Association for the year 1970 was an excess of income over expenses of \$2,521.67 as set forth in Exhibit B.

Balance Sheet

The financial position of the Association at December 31, 1970 is presented in Exhibit A. Comments on the larger balance sheet accounts follow:

Cash in banks, as shown by the books, was reconciled to the regular monthly bank statements and confirmations received from the depositories. The petty cash fund was verified by physical count.

Investments with a cost of \$144,137.42 were confirmed by a statement from the custodian, Mercantile Trust Co. Investment income for the year was as follows:

Interest—Certificate of Deposit	\$ 7,293.11
Interest and discount on bonds	4,620.86
Dividends on Stock	1,756.41

Total Investment Income \$13,670.38

Accounts Receivable—Advertisers of \$3,984.78 represent the unpaid balance due from Journal advertisers. Of this amount \$3,871.78 was due from the State Journal Advertising Bureau as follows:

December 1970	\$1,533.16
November 1970	2,180.05
Prior to November 1970	158.57

Total \$3,871.78

On January 9, 1971 a check was received paying \$2,052.79 of the November and prior accounts.

Unpaid dues of \$3,168.75, offset by a reserve account in like amount, represent 1970 dues of delinquent members carried at the request of local Societies. Other delinquent members were dropped from membership in accordance with the by-laws. Exhibit D presents a summary of unpaid dues and membership by Societies, as shown by the records of the Association.

Furniture and fixtures continue to be stated in the fixed amount of \$1,000. Equipment purchases, rentals and repairs for the year in the sum of \$5,768.72 were charged to expense in lieu of depreciation.

The records were carefully reviewed for liabilities at December 31, 1970 and it is believed that all current liabilities of substantial amount are included in the Balance Sheet.

Exhibitors have made advance payments of \$3,695.00 for annual session exhibit space and these payments will be taken into income when earned in 1971.

The excess of assets over liabilities in the amount of \$151,950.62 is shown in the Balance Sheet as a "Reserve for Future Activities."

General

During the year, payments were made to and for the following sponsored organizations:

Missouri State Medical Association Pension Fund	
Employees' Retirement Insurance Pension	\$ 7,220.97
Employees' Pension Plan Contribution	14,536.50
Total	<u>\$21,757.47</u>

Missouri State Medical Foundation—Insurance, audit, and printing	\$ 3,144.75
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Collections for the American Medical Association and the Missouri State Medical Foundation are made along with the Missouri State Medical Association annual dues. Following is a schedule of dues and assessments for each member:

	Active	Junior
Journal	\$ 3.00	\$ 3.00
Association General Fund	62.00	29.50
Foundation Assessment	10.00	5.00
Missouri State Medical Association		
Dues and Assessments	\$ 75.00	\$ 37.50
American Medical Association	70.00	70.00
Totals	<u>\$145.00</u>	<u>\$107.50</u>

Except for \$32.50, the 1970 collections of \$35,567.50 for the Missouri State Medical Foundation have been remitted along with \$950.83 due from the year 1969. The \$70 per member collected for the A.M.A. totalling \$222,950.00 has been remitted except for \$35.00.

Insurance policies were inspected and the following general insurance was in force at the close of the year:

Insurance on	Type of Coverage	Amount
Furniture and Fixtures	Fire and Extended Coverage (80% co-ins.)	\$ 6,500
Employees	Workmen's Compensation	Statutory
Lessee's Liability	Bodily Injury	\$50,000/100,000
Treasurer	Fidelity Bond	\$ 20,000
All Other Employees	Fidelity Bond	\$ 10,000
Journal Publication	Publishers' Liability (\$2,500 deductible)	\$500,000
Journal Publication	Advertisers' Liab. (\$2,500 deductible)	\$500,000
Automobiles of Executive Secretary and three assistants	Non-ownership—Bodily Injury	\$100,000/300,000
	Non-ownership—Property Damage	\$ 25,000
Members and Auxiliary members on M.S.M.A. business under age 70	Travel Accident (away from home)	\$25,000/250,000

Subject to the comments thereon, the attached statements, in our opinion fairly present the financial position of the Missouri State Medical Association at December 31, 1970 and the result of the activities for the year then ended. The records for the year were kept in accordance with accepted principles of accounting applied on a basis consistent with that of the preceding year.

Yours very truly,
LENNERTSON & Co.
Certified Public Accountants

EXHIBIT A

Missouri State Medical Association Balance Sheet, December 31, 1970

Cash	Assets
Mercantile Trust Company (Treasurer's Account)	\$ 12,347.68
Central Missouri Trust Company (Secretary's Account)	858.88
Petty Cash Fund	25.00
	<u>\$ 13,231.56</u>

Investments at Cost (Exhibit C-2)

Certificate of Deposit	\$ 30,000.00	
U. S. Government Bonds	50,502.68	
Corporate Bonds	18,000.00	
Common Stock	45,634.74	
Total (Market Value \$155,938)		\$144,137.42

Accounts Receivable

Advertisers	\$ 3,984.78	
Mercantile Trust Company Investment Custodian	2,898.21	6,882.99

Dues Receivable—Exhibit D (See Reserve—Contra)		3,168.75
Furniture and Fixtures (at stated value)		1,000.00
Advances for Travel Expenses		539.29
		<u>\$168,960.01</u>

Liabilities

<i>Accounts Payable</i>		
Supplies and Expenses	\$ 9,428.87	
Payroll Taxes	649.27	
Due Missouri State Medical Foundation	32.50	
Due American Medical Association	35.00	\$ 10,145.64

Deferred Credit to Income

Advance Payments by Exhibitors for 1971 meeting		3,695.00
Reserve for Uncollected Dues		3,168.75

Reserve for Future Activities

Balance January 1, 1970	\$143,516.58	
Reinvestment of Permanent Investment Income	5,912.37	
Excess of Income over Expenses for the year 1970—Exhibit B	2,521.67	151,950.62
		<u>\$168,960.01</u>

EXHIBIT B

**Missouri State Medical Association
Income Statement for the Year 1970**

Particulars	General Activities	Journal Publication	Total
<i>Income</i>			
Dues Received (including \$3.00 per member annually for the Journal)	\$218,535.15	\$ 12,513.00	\$231,048.15
Rentals—Annual Session Exhibit Space	11,250.00		11,250.00
Subscriptions to the Journal—Nonmembers		508.50	508.50
Advertising Space—the Journal		37,558.25	37,558.25
Investments—Interest and Dividends	13,670.38		13,670.38
Collection Fees on A.M.A. Dues	2,284.80		2,284.80
Collection Fees on Taxes Withheld	37.06		37.06
Total Income	\$245,777.39	\$ 50,579.75	\$296,357.14

Expenses

Salaries	\$100,808.76	\$ 11,994.29	\$112,803.05
The Journal—Paper, Printing, etc.		42,663.47	42,663.47
Cash Discount to Advertisers		143.92	143.92
Commission on Journal Advertising		5,972.55	5,972.55
Postage	3,182.13		3,182.13
Commissions and Meeting Expense	54,556.74		54,556.74
Custodian Fees—Investments	446.29		446.29
Dues and Subscriptions	543.80		543.80
Employee's Pension Plan Contribution	21,757.47		21,757.47
Equipment Purchases, Rentals and Repairs in lieu of Depreciation	5,293.27	475.45	5,768.72
Insurance—General	471.00		471.00
Insurance—Blue Cross	1,094.74	188.98	1,283.72
Missouri State Medical Foundation	3,144.75		3,144.75
Office Rent and Light	6,880.92	763.11	7,644.03
Professional Fees	6,760.08	1,400.00	8,160.08
Reinvested Reserve Income	5,912.37		5,912.37
Stationery, Printing and Office Supplies	3,101.16		3,101.16
Student Awards	225.00		225.00

Taxes—Payroll	3,251.01	487.45	3,738.46
Taxes—Other	29.75		29.75
Telephone and Telegraph	7,335.02	211.41	7,546.43
Traveling Expenses—Executive Secretary and Assistants	4,740.58		4,740.58
Total Expenses	\$229,534.84	\$ 64,300.63	\$293,835.47

Excess of Income over Expenses	\$ 16,242.55	\$ 13,720.88	\$ 2,521.67
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EXHIBIT C-1

**Missouri State Medical Association
Statement of Commissions and Meeting
Expenses for the Year 1970**

Annual Session	\$17,074.62
Council	9,075.14
Delegates to A.M.A.	11,487.31
Public Affairs	5,077.14
Woman's Auxiliary	2,292.32
Commissions:	
Commission on Medical Economics, Third Party Medicine, and Governmental Relations	\$ 426.80
Commission on Continuing Education and Health Manpower	563.62
Commission on Medical-Legal Affairs	44.26
Commission on Interspecialty Medicine	2,089.85
Committee on Constitution and By-laws	80.52
Committee on Legislative Affairs	150.00
Committee on Planning	45.15
Council Appointed A.M.A. Committee on Himler Report	228.19
Peer Review (Ad Hoc under Council)	5,921.82
9,550.21	
Total	<u>\$54,556.74</u>

EXHIBIT C-2

Statement of Investments December 31, 1970

Description	Bonds at Par	Cost
Certificate of Deposit 5% 1/6/71	\$30,000.00	\$ 30,000.00
U. S. Treasury Bond 2½% 3/15/71-66	5,500.00	5,500.00
U. S. Treasury Bond 4¾% 5/15/72	10,000.00	10,002.68
U. S. Treasury Bond 5¾% 11/15/74	10,000.00	10,000.00
U. S. Treasury Bond 8% 5/15/71	25,000.00	25,000.00
Pacific Gas and Electric 4½% 6/1/90	5,000.00	5,000.00
C.I.T. Financial Corp. 5.022% 1/4/71	13,000.00	13,000.00
Standard Oil of California 116 shares		5,067.48
John Mansville 200 Shares		5,582.34
Central and Southwest Corp. 200 Shares		6,345.62
Connecticut General Insurance Corp. 75 Shares		3,025.24
American Home Products Corp. 50 Shares		3,006.88
Firestone Tire and Rubber Co. 70 Shares		3,771.93
Burndy Corporation 124 Shares		3,676.12
Interco-Common No Par 332 Shares		9,997.20
J. P. Morgan and Co., Inc. 122 Shares		5,161.93
		<u>\$144,137.42</u>

EXHIBIT D-1

**Missouri State Medical Association
Dues Receivable and Membership
by Societies December 31, 1970**

MEMBERSHIP

Societies	Junior	Active	Honor	Total	Unpaid Dues
Andrew		3		3	
Audrain	2	16	1	19	
Barton		5		5	
Boone	28	150	5	183	\$ 150.00
Buchanan	2	79	13	94	75.00
Butler-Wayne-Ripley		38	1	39	
Callaway		15	2	17	75.00
Cape Girardeau	3	51	2	56	75.00
Carter-Shannon			1	1	
Chariton-Macon-Monroe-Randolph		16	5	21	75.00
Clay	6	70	3	79	225.00
Clinton		4		4	
Cole	4	44	3	51	
Cooper		9	1	10	75.00

Dallas-Hickory-Polk-Dade		9	1	10	
Dunklin	1	16	2	19	
Franklin-Gasconade-Warren		26		26	
Grand River		33	3	36	
Greene	16	169	8	193	
Henry		7	1	8	
Howard		5	1	6	
Jackson	88	668	130	886	337.50
Jasper	4	59	5	68	143.75
Jefferson	4	14	2	20	
Johnson	1	12	1	14	
Lafayette-Ray	2	20		22	
Lewis-Clark-Scotland		2		2	
Marion-Ralls-Shelby	2	20	3	25	
Mid-Missouri	1	28	2	31	
Miller		2		2	
Mineral Area	2	30	1	33	
Moniteau		3		3	
Montgomery		3	1	4	
Morgan	1	4		5	
North Central		8	1	9	75.00
Northwest Mo.		16	1	17	212.50

Ozark	1	35	6	42	
Pemiscot		12	1	13	\$ 75.00
Pettis	3	27	1	31	150.00
Perry-St. Genevieve		8	2	10	
Pike		9		9	75.00
Platte	1	5	1	7	
St. Charles-Lincoln	1	44		45	
St. Louis City	116	1,198	104	1,418	1,200.00
St. Louis County	15	409	49	473	75.00
Saline		10	2	12	
Semo	7	23	2	32	
South Central	1	16	2	19	
Webster		2		2	
West Central	4	27	6	37	75.00
Totals	316	3,479	376	4,171	\$3,168.75 (A)

(A) Delinquent dues of members at December 31, 1970 carried at the request of local Societies.

FINANCIAL STATEMENT FOR THE YEAR 1970

LENNERTSON & COMPANY
CERTIFIED PUBLIC ACCOUNTANTS

ST. LOUIS, MISSOURI 63105

January 28, 1971

Missouri State Medical Foundation
515 East High Street
Jefferson City, Mo. 65101

Gentlemen:

An examination was made of Balance Sheet of the Missouri State Medical Foundation, a non-profit Missouri corporation, for the year 1970. The Balance Sheet at December 31, 1970 is on a cash basis and the additions for the year are set forth in Exhibit A.

Recorded receipts for the year were traced in total into the bank account as deposits and paid checks were seen for the disbursements. A direct confirmation was received from the depository in verification of the cash balances on deposit.

A summary of the loans to medical students follows:

Loans Receivable January 1, 1970	\$295,571.99
Loans made during the year	52,800.00
Total	\$348,371.99
Less Loan Repayments	20,690.79
Loans Receivable December 31, 1970	\$327,681.20

Positive confirmations were mailed on the 237 individual loans stating their principal loan balances as of August 31, 1970. As of January 15, 1971, 227 confirmations have been returned confirming their principal loan balances at 8/31/70 of \$325,015.14 out of total loans of \$339,749.32. One additional loan was made after Aug. 31, 1970 in the amount of \$750.00 which has not been confirmed. Interest income on loans is recorded on a cash basis and the amount received in 1970 was \$4,026.78. Accrued interest on outstanding loans at December 31, 1970 amounted to \$25,389.79 and is not included in the loan balances in Exhibit A.

Interest received on the savings account and the certificate of deposit amounted to \$1,219.60. The certificate of deposit due January 6, 1971 was renewed for six months and interest of \$954.16 was received.

The Missouri State Medical Association paid expenses for the Foundation as follows:

State Registration Fee	\$ 1.00
Professional Fees	1,100.00
Insurance Premium	1,927.34
Printing	116.41
Total	\$3,144.75

These amounts have not been recorded as receipts and disbursements on the records of the Foundation.

U. S. Treasury Department form 990A has been prepared for the year 1970 and is due for filing on May 15, 1971.

We have examined the Balance Sheet of Missouri State Medical Foundation as of December 31, 1970, prepared on the cash basis. The examination was made in accordance with generally

accepted auditing standards and include such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. Since the Balance Sheet is on the cash basis, no opinion is expressed on the attached statement as accrued interest on loans of \$25,389.79 and \$954.16 of accrued interest on certificate of deposit is not shown. In addition no reserve for uncollectable loans has been provided. The Balance Sheet is prepared on a basis consistent with that of the preceding year.

Yours very truly,
LENNERTSON & Co.
Certified Public Accountants

EXHIBIT A

MISSOURI STATE MEDICAL FOUNDATION

Balance Sheet (Cash Basis), December 31, 1970

Assets	
Cash in Checking Account	\$ 40,054.60
Savings Account	6,512.07
Certificate of Deposit due Jan. 6, 1971	19,083.51
Loans Receivable from Medical Students	327,681.20
Total Assets	\$393,331.38
Fund Reserve	
Balance January 1, 1970	\$347,270.67
Cash Additions for the Year 1970	
Interest on Loans	\$ 4,026.78
Interest on Bank Deposits	1,219.60
Contributions (see below)	4,328.50
Assessment of Members—Active	
\$10.00; Junior \$5.00	36,485.83
Total for year 1970	46,060.71
Total Reserve	\$393,331.38
Contributions	
John N. Martin, M.D., St. Joseph, Mo.	\$ 225.00
South Central Counties Medical Society	200.00
Woman's Auxiliary to MSMA	1,353.00
Long's Drug Store, Boonville, Mo.	200.00
Foster's Drug Store, Boonville, Mo.	100.00
Hirsch Rexall Drugs, Boonville, Mo.	150.00
Miller's Medical Arts Pharmacy, Inc., Boonville, Mo.	175.00
Boonville Medical Group, Boonville, Mo.	200.00
St. Louis County Medical Society	100.00
Max S. Franklin, M.D., St. Louis, Mo.	100.00
Albert D. Cross, M.D., Trenton, Mo.	100.00
Doyle C. McCraw, M.D., Bolivar, Mo.	100.00
Hector W. Benoit, Jr., M.D., Kansas City, Mo.	100.00
Buchanan County Medical Society Auxiliary, St. Joseph, Mo.	370.00
Buchanan County Med. Society Auxiliary (Christmas Project), St. Joseph, Mo.	207.50
Paul R. Whitener, M.D., St. Ann, Mo.	250.00
Sub-total	\$3,930.50
Contributions under \$100 each	398.00
Total Contributions	\$4,328.50

In Memoriam

Barnett, Julian H., M.D., Kirkwood, a graduate of St. Louis University, 1945; member St. Louis County Medical Society; age, 50; died Dec. 6, 1970.

Pickens, E. E., M.D., San Diego, Calif., a graduate of the University of Nashville, 1901; member of Jackson County Medical Society; age, 92; died December, 1970.

Seabaugh, Oda L., M.D., Cape Girardeau, a graduate of Barnes University, 1908; member of Cape Girardeau County Medical Society; age, 85; died Dec. 9, 1970.

Ramos, John F., Jr., M.D. Kansas City, a graduate of Meharry Medical School, 1945; member of Jackson County Medical Society; age, 50; died Dec. 28, 1970.

Press, Maurice J., M.D., St. Louis, a graduate of Washington University, 1909; member of St. Louis Medical Society; age, 84; died Dec. 29, 1970.

Castelaw, Rush E., M.D., Kansas City, a graduate of Kansas City Medical College, 1902; member of Jackson County Medical Society; age, 100; died Dec. 30, 1970.

Rodeman, John M., M.D., Sedalia, a graduate of Washington University, 1938; member of Pettis County Medical Society; age, 57; died Jan. 1, 1971.

Dennie, Charles C., M.D., Kansas City, a graduate of the University of Kansas, 1912; member of Jackson County Medical Society; age, 86; died Jan. 13, 1971.

CLASSIFIED ADS

ARKANSAS—PSYCHIATRY RESIDENCY—In an excellent, dynamic diversified, non-obligated UNIVERSITY program. Stipends: \$11,000—\$14,000 plus fringe benefits. Write Wm. G. Reese, M.D., 4301 W. Markham (Slot 506), Little Rock, Arkansas 72201. Phone (501) 664-5000.

GENERAL PRACTICE OPPORTUNITY—Two busy generalists wish to take in third man and form a three-man group. Two large open staff hospitals within short driving distance. \$25,000 first year guarantee with early partnership to the right man. Beautiful, clean town with booming economy. Write or call E. F. McDonald, M.D., 215 West Main, Jackson, Mo. 63755.

OPPORTUNITY—to open practice in Missouri Ozarks. Modern nursing home and well-equipped, 60-bed modern hospital with full staff privileges available. Cabool has newly-paved airport; AAA school system; beautiful, new 9-hole golf course; tennis courts; heated pool; club house. Good hunting, e.g., deer, turkey, dove, quail. Good fishing and boating. Present doctor will help introduce and will share calls and week-end duties. Write to Physician, Box 40, Cabool, Mo. 65689.

OFFICE BUILDING—With medically-equipped office and an active, prosperous practice of a recently deceased general practitioner in Festus, Mo. One mile to a hospital; 45 minutes north to St. Louis. For further information, contact Mrs. Rose Bolgar, 228 N. Adams, Festus, Mo. 63028. Phone 314-937-2016.

OPHTHALMOLOGIST WANTED—Sudden death has created urgent need; private practice serving five

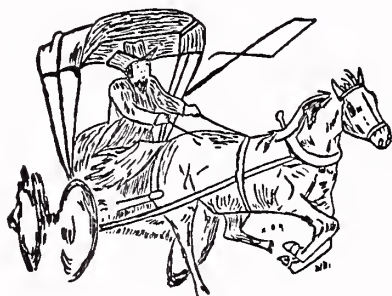
counties. Modern, fully-equipped office in a Missouri county seat. Town has staffed hospital plus several large industries. Unlimited opportunity for a good man. Phone 314-581-5997 in Mexico, Mo. or contact Box 369, Missouri State Medical Association, 515 E. High, Jefferson City, Mo. 65101.

TWO POSITIONS—Open for M.D.s under 55 years of age who wish challenging medical practice with regular hours and minimal night work. Paid vacation and medical meeting plus fringes. Compatible medical staff of eight, working in 40-bed, Joint Commission Accredited Hospital. Attractive college town of 35,000. Robert E. Sinclair, M.D., Lafene Center and University Hospital, Kansas State University, Manhattan, Kansas 66502.

1970 CADILLAC—Four-door DeVille, less than 10,000 miles. Showroom-new at wholesale price, \$5,200. C. Stuart Exon, M.D., 515 East High St., Jefferson City, Mo. 65101. Call (AC 314) 635-4547 or 635-2150.

ST. ANTHONY'S HOME—1414 E. 27th St., Kansas City, Missouri 64108; 816-221-7191. Rochelle Trigg, Administrator. Founded 1898. Residence for young unmarried pregnant girls and an outpatient center for unmarried parents of all faiths. Comprehensive services available—medical, prenatal courses, 24-hour licensed nursing staff; psychological services through personality and vocational testing and group therapy sessions with staff psychologist; casework and counseling; accredited educational courses on high school and college level. Adoptions may be made through Catholic Family and Community Services who provide adoptive parents of all faiths.

Missouri Medicine in Review



FORTY YEARS AGO

E. T. Hornback, M.D., Moberly, reports an unusual family history of hereditary cataract: "In the 18th century, Jacob K., the father of 18 children, five girls and 13 boys, dwelt in Kentucky. In 1798, several of these children moved to St. Charles, Missouri. Two of Jacob's grandchildren (first cousins) were united in marriage. To this union, nine children were born, three girls and six boys. Four of these, two girls and two boys, had cataracts and it is with this family that the unusual record of hereditary cataract begins. So far, I have obtained the history of 28 grandchildren, 15 of whom, eight girls and seven boys, have been operated upon for cataract. That is 53% plus. I have obtained also the history of 41 great grandchildren, nine of whom, four girls and five boys, have been operated upon."

A permit was issued by the City of St. Louis on February 16 for construction of the \$1,000,000 building of the Firmin Desloge Hospital, 1325 South Grand. The permit included the erection of a chapel made possible by a \$100,000 gift from Mrs. Firmin Desloge on February 15. This hospital fund was donated under the will of Firmin Desloge, lead mining magnate.

Three beds in Research Hospital, Kansas City, will be supported throughout the year by the proceeds of an annual charity ball given by the Woman's Auxiliary of the Hospital on February 16. The average annual cost of three beds is \$3,000 and they serve approximately 150 patients a year.

TWENTY-FIVE YEARS AGO

The 88th Annual Session of the MSMA will be held on March 24-26 at the Jefferson Hotel

in St. Louis. Dr. J. W. Thompson, St. Louis, is chairman of the General Committee on Arrangements. Drs. H. B. Goodrich, Hannibal, and R. B. Denny, Creve Coeur, are on the committee. Members of the Executive Committee are Drs. Robert Mueller, Chairman, Curtis H. Lohr and E. P. Buddy.

Dr. E. C. Snavely, Sedalia, has been reappointed Pettis County physician.—Dr. E. Claude Bohrer, West Plains, has been elected president of West Plains' new Civic Music Club.—Dr. Asa Barnes, Jefferson City, has been appointed director of general medical services of the American Red Cross. Before entering service, he was associated with the Missouri State Health Department and practiced medicine in Dexter.

Lt. Col. Brian Blades, St. Louis, has been appointed professor of surgery at George Washington University School of Medicine in Washington, D. C. He has been chief of the thoracic surgery section of Walter Reed General Hospital for the last three and one half years. Last spring, he was cited by the Army for his work in improving the techniques of chest surgery.

TEN YEARS AGO

It was voted that Dr. Raymond A. Muether, St. Louis, be asked to write a letter for the Missouri State Medical Association to Mrs. Agnes Dooley expressing sympathy on the death of her son, Dr. Thomas A. Dooley, Jr. and expressing the admiration of the Association for Doctor Dooley and his work.

The speaker at the 12th annual Dr. F. G. Thompson Memorial Lecture on May 17 at the Thompson, Brumm & Knepper Clinic in St. Joseph will be O. T. Clagett, M.D., Mayo Clinic, who will speak on "Treatment of Carcinoma of the Breast: A Controversial Subject."

Dr. John R. Dixon is the new president of the medical staff of the Gen. John J. Pershing Hospital in Brookfield. Dr. B. D. Howell is secretary.

Despite an evening of inclement weather, 50 people including doctors, their wives and guests attended a joint dinner-meeting of the Henry, Johnson, Pettis, Saline, Lafayette-Ray County Medical Societies at the Pacific Cafe in Sedalia on January 25. A social hour gave all late arrivals sufficient time to be present when an excellent steak dinner was served.

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The hypochondriac fugitive from anxiety

For many patients with hypochondriacal tendencies, physical complaints represent a device by which they can avoid facing emotionally charged personal problems. When anxiety is pronounced, the calming action of Librium (chlordiazepoxide HCl), by relieving anxiety, may foster communication, favor productive counseling and accelerate relief of anxiety-linked symptoms.

Librium is used alone or concomitantly with certain primary drugs for some medical conditions associated with undue anxiety. It has demonstrated a dependable antianxiety action in many clinical areas. For oral administration, Librium is supplied in three dosage strengths to control mild, moderate and severe anxiety.

**whenever moderate to severe
anxiety is a contributory factor**

Librium® 10 mg
(chlordiazepoxide HCl)
1 or 2 capsules
t.i.d./q.i.d.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported at recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its pos-

sible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or aversion, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal

relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION



APRIL, 1971

VOLUME 68, NUMBER 4

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113th MSMA Annual Session
April 15-18, St. Louis

IF MORE MEN CRIED



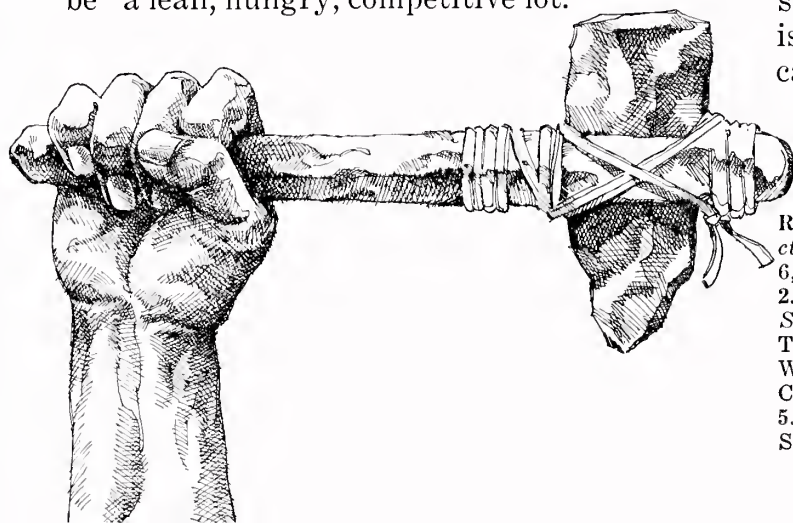
At least seventy-five out of one hundred adults with duodenal ulcers are men.¹

Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."²

Hypersecretion—an atavistic response.

Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."²

By chance? A lean, hungry lot. Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."³



Big boys don't cry. If more men cried maybe fewer would wind up with duodenal ulcers. But men will be men—the sum total of their genes and what they are taught. Schottstaedt observes that when a mother admonishes her son who has hurt himself that big boys don't cry, she is teaching him stoicism.⁴ Crying is the negation of everything society thinks of as manly. A boy starts defending his manhood at an early age.



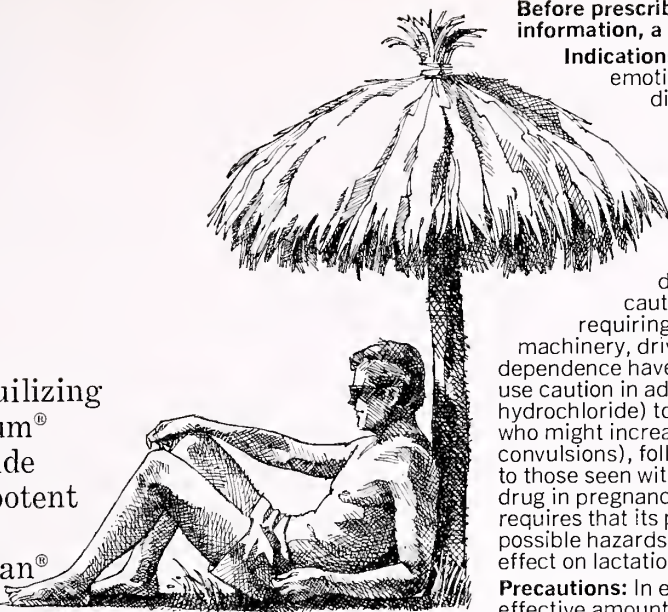
Take away stress, you can take away symptoms

There is no question that stress plays a role in the etiology of duodenal ulcer. Alvarez⁵ observes that many a man with a ulcer loses his symptoms the day he shuts up the office and starts out on a vacation. The problem is, the type of man likely to have a ulcer is the type least likely to take long vacations or take it easy at work.

The rest cure vs. the two-way action of Librax.® For most patients, the rest cure is as unrealistic as it is desirable. Still, the stress factor must be dealt with. And here is where the dual action of adjunctive Librax can help. Librax is the only drug that com

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M. M. et al. (eds.): *Harrison's Principles of Internal Medicine*, 6, New York, McGraw-Hill Book Company, 1970, p. 144. 2. Wolf, S., and Goodell, H. (eds.): *Harold G. Wolff Stress and Disease*, ed. 2, Springfield, Ill., Charles Thomas, 1968, pp. 68-69. 3. *Ibid.*, p. 257. 4. Schottstaedt, W. W.: *Psychophysiologic Approach in Medical Practice*, Chicago, Ill., The Year Book Publishers, Inc., 1960, p. 16. 5. Alvarez, W. C.: *The Neuroses*, Philadelphia, Pa., W. B. Saunders Company, 1951, p. 384.

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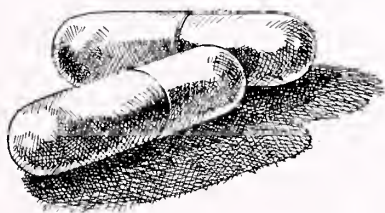


Protects man from his own hungry personality. The action of Librium reduces anxiety—helps protect the vulnerable patient from the psychological overreaction to stress that clutches his stomach. At the same time, the action of Quarzan helps quiet the hyperactive gut, decreasing hypermotility and hypersecretion.

An inner healing environment with 1 or 2 capsules, 3 or 4 times daily. Of course, there's more to the treatment of duodenal ulcer than a prescription for Librax. The patient—with your guidance—will have to adjust to a different pattern of living if treatment is to succeed. During this adjustment period, 1 or 2 capsules of Librax 3 or 4 times daily can help establish a desirable environment for healing.

Librax: It can't change man's nature. But it can usually make it easier for men to cope with the discomfort of stress—both psychic and gastric—that can precipitate and exacerbate duodenal ulcer.

Librax: Rx #60 1 cap. *a.c.* and 2 *h.s.*



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, over-sedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

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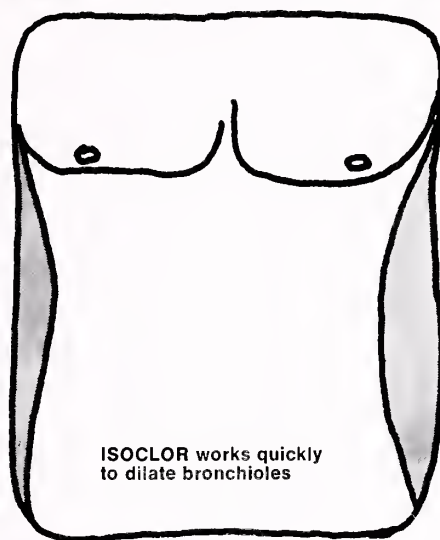
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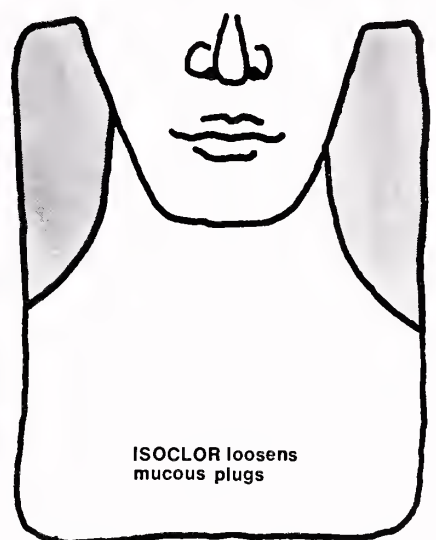
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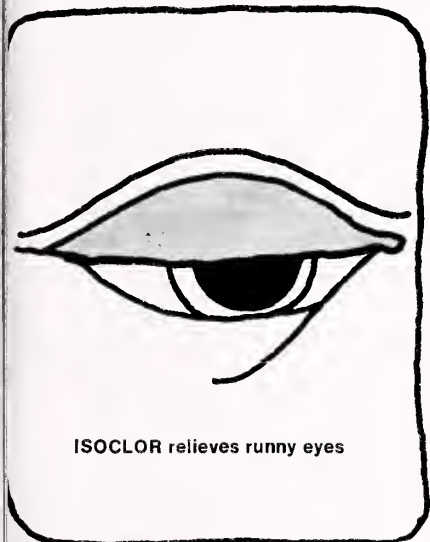
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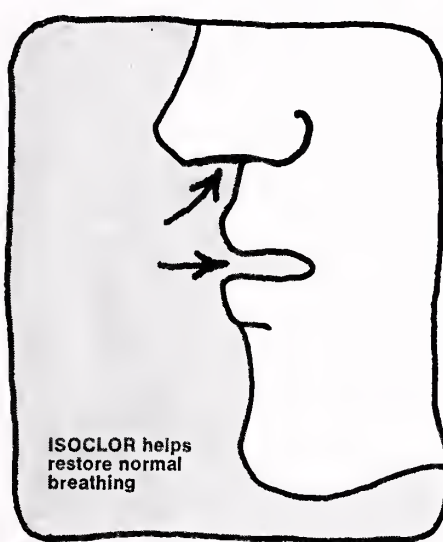
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Public Speaking—An Organic Approach

Special Article

DURING my third year of medical school, I listened all morning and each morning to the most boring lectures in my entire education. The experience was considered traditional. This old lecturing tradition was excused as "professional restraint," "academic mood" or "scientific tone." "After all," we were told, "they're not showmen; they're scientists."

We could only hope for rare relief from the lips of a speaker with charisma, and we were a silent majority, listening and ignored. Since then, fortunately, young faculty have become interested in the quality of teaching, and the trend now is to adapt the best modern methods of speaking to the needs of medical education. The tradition of leaden dullness in medical lectures must not persist into the age of television, recorded messages and computer communication.

Consider an outstanding clinician or researcher. Observe him explaining his work to his friends or students in the laboratory or over coffee and you see his vitality and wit spread out over his listeners as the subject he describes becomes part of their experience. Then observe him reading a paper at a national meeting and you may see the effect on his audience of his frozen speaking personality. What has happened to his authentic excitement? How can we help him become an effective public speaker?

Let no one doubt that the medical profession needs his effective speaking. The astounding growth of the health care industry, with all the related political problems and benefits, will demand that each of us take on speaking responsibilities. A new set of teaching problems, more difficult than those between student and faculty, have developed between the medical profession and its public, the political leaders, trustees and patients. As never before, we are concerned with the outcome of programs which may hang on the decisions of laymen and leaders who have heard us speak.

Recently, our experience in training residents

and administrative leaders in medical school and seeing good results from such training has led us to offer a step-wise modern approach to effective speaking. All the steps in training require participation of the pupil and the attention of a professional speaking coach. The exercises are stressful and difficult. We have learned during fatiguing training sessions that the game of public speaking requires physical readiness and athletic stamina. Such training can free anyone in our profession to communicate with authentic excitement. Training can make us speakers who perform well in any situation from medical rounds to an antivivisectionist rally.

Such courses and training opportunities to learn better speaking techniques are often available through the adult education programs of your high school, college or the University of Missouri Extension Center in your county, or they could be offered through the Continuing Education Program at the University of Missouri Medical School, if the need were known. (Interested persons are invited to write to Continuing Medical Education, M-175, University of Missouri Medical Center, Columbia, Mo. 65201.) Training also is available through Toastmasters International, and you may wish to join a local club.

Suppose you have been invited to speak to a community group. Let us state an assumption too often forgotten because it is tacit:

You, as an expert, have been asked to share what you know with an audience. *Share* is key word here, not *hide* or *apologize* or *sanctify*. And an audience invariably recognizes when you give reluctantly. Forgetting this basic assumption, some lecturers seem intent on driving off their audience. They pretend to be only a tape recording of an essay and, without the human presence, only the most interested in the audience will survive. We insist on the other approach.

Each talk is a "total-go" at the audience, starting from before the introduction and lasting until the audience is gone. The speaker commits

himself to sharing and letting his subject affect his listeners. Speakers seldom can over-exert themselves in this commitment. On the contrary, their most common problem is excessive restraint. A speaker begins to get ready when he accepts the invitation to speak, to give the audience the best professional show he can provide.

We have found that speakers can get ready best by choosing whatever character-relationship they intend to establish toward the audience. Are you a revered authority, a newcomer, a peer, Big Brother, a friend or a foe to this audience? Do you wish to calm them, scare them or gently surprise them? By defining what kind of expert you are and what your purpose is, you immediately simplify the organization of what you know, for now you can choose the best ways to affect and interest your listeners. In training, this skill in establishing a character-relationship is one of the more valuable and more difficult to learn.

As an expert, you already know far more about the topic than you plan to say. If not, become an expert on the topic. Study it until, like the rest of your professional expertise, it oozes out of every pore. In your most expert work, your demeanor never betrays an apology. Just so in speaking, no apology will show if you decide what characterization suits you and your audience. Say the best part of what you know well and stop.

Rehearse and rehearse and rehearse. At first, you may just be discussing your main ideas with your family, students, partners or secretary. That is rehearsal—an imperative part of getting ready. From these earbendings, you will both clarify your ideas and, more important, you may begin to discover how your character-choice works on listeners. Now form the ideas into interesting statements that outline your talk and rehearse these on someone. For a major lecture, rehearse in a room or on a stage similar to the real one, acting “as if” you were speaking to the real audience. From this rehearsal process, your lecture emerges naturally as a well-verbalized message with a characterization appropriate to ordinary conversation.

We often are asked if there is any sure-fire technique for the introduction of a lecture. “Should we say ‘Ladies and gentlemen’ or start with a joke?” Experience shows there is no “proper” introduction. “Ladies and gentlemen” can put off an audience if it does not sound conversational. “Have you heard the one about

The growth of the health care industry with its related legislative problems and benefits has created an unprecedented demand for the members of the medical profession to become effective public speakers, a task often difficult for the inexperienced. Doctor Anderson states that this paper “describes the best and most difficult method of improving speakers” he has found. The method derives from training of professional actors, rather than debaters. It is from a course in public lecturing which was presented at the University of Missouri Medical Center with successful results.

Doctor Anderson is from the Division of Dermatology, University of Missouri School of Medicine and Mr. Newman is from the Theater Arts Department, Stephens College.

Readers who have a need to improve their own lecturing skills are invited to contact the Continuing Medical Education Department at the Medical Center.

the bishop and the beaver” may ring deadily feeble to an audience which watches “Laugh-In.” Joke-telling is risky at best. Humor works best when organic and original, arising from the special situation of the audience or the current activities of the meeting, especially if the humor clarifies some important issue for this audience. Admittedly, original and organic humor is difficult to achieve, but it most often occurs in a well-rehearsed lecture.

You may want to write out the first sentence of your speech near the end of the rehearsal period. By this time, you know your material and you have gauged its effect upon some listeners. You need only a few catch words for the rest of the speech, perhaps a list of slides you intend to use and statistics you want to deliver exactly. Because you have chosen a character relationship to your anticipated listeners, you are prepared to replace the printed monograph or the tape recorder with your vital presence, the public speaker.

The day before the speech, get some extra rest. Arrive well ahead of the lecture time. Before the meeting, inspect the actual room where you will speak. Check the acoustics of the room by speaking to someone a considerable distance from your podium. If you do not hear a slight

echo of your voice, you have discovered that you will have to adjust your speaking volume to a louder level. The preceding test will give your self-assurance a boost, and you may practice your stance and rehearse your opening lines. If the microphone is adjustable, set it directly under the tip of your chin; it will be close enough to your mouth to amplify your every word without annoying popping, puffing or blowing sounds. Keep your entire face visible.

About charisma, everyone has some and can learn to use it well in speaking. You have come to this lecture committed to share your professional knowledge with your audience. Doubtless, you want this to be not only the best speech you can give, but a speech with a special magic. At its strongest, charisma is the heady stuff of which great politicians, preachers and demagogues are made. Many in our profession have mastered this process. By keeping their plans flexible and by superb characterization, they arouse and fulfill the expectations of their audience. A man able to give consistently such unusual and excellent lectures is called in argot an "iceman." At best, the iceman conveys spontaneity and integrity, a combination of theatrical skills, exceptional professional learning and original teaching ideas. Senior icemen are worth close study if you wish to project charisma yourself.

As you compose yourself now, settle for a little less—your best effort. By listening to others at the meeting and seeing what's going on, you may perceive at this late moment the apt item of organic humor you have searched for in vain until now. By speaking from notes rather than reading a paper, you have allowed for new com-

binations and permutations. You may restructure your notes to answer directly and clearly the major questions raised by prior speakers. It is a special advantage that you can respond to the audience's interest because you have a flexible presentation.

Getting set, you feel nervousness. Use it. Nervousness is emotional energy which can be channeled into the physical demands of your speaking performance. Concentrate on organizing this nervous energy by breathing slowly and deeply and by keeping your eyes and ears open. With practice, your best lectures will result from your accepting tension for what it is: The passion to say it like it is. Training and coaching can greatly improve the speaker who feels handicapped by nervousness, because he has the energy available for redirection.

The introductions are over. Your name has been announced. You go. Your techniques of preparation and rehearsal are behind you, and you step up to speak with real joy "to share what you know" with the audience. Before beginning, look hard at the audience and see that they are really looking back and listening. Take another deep breath and keep that contact. Deliberately share your character—in the flesh—and your voice, which is the ultimate in high fidelity. Trust your techniques, trust your emotional energy and trust your intuition. These listeners are not competitors. After all, they did invite you to talk.

*Reprints: Philip C. Anderson, M.D.
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Dr. Miller to Become MSMA President

AMA Leader Will Speak at Banquet

Russell B. Roth, M.D., Erie, Pa., will be the banquet speaker on Saturday night, April 17 during the 113th Annual Session of the Missouri State Medical Association at the Chase Hotel in St. Louis.

Dr. Roth was elected Speaker of the House of Delegates of the American Medical Association in 1969. He was re-elected last year.

Dr. Roth is attending urologist at St. Vincent's Hospital in Erie and consulting urologist for a Veterans Administration hospital.

Long active in AMA affairs, Dr. Roth has served on several committees and as chairman of the Council on Medical Service. He also has been chairman of the Pennsylvania Medical Society's Board of trustees and speaker of its House of Delegates.

Dr. Roth is an author and lecturer on urological subjects. He is a member of the American Urological Association, a Fellow of the American College of Surgeons and of the Academy of International Medicine.

Dr. Roth recently appeared as a witness before the U.S. Senate Health Subcommittee and outlined improvements in the present health care system that could be achieved largely through private means. He also stressed the AMA's Medigap bill which would assure the poor access to quality health care, help others purchase private health insurance through a sliding scale of tax credits and insure everyone against financially catastrophic illness.



Gerald L. Miller, M.D.



Joseph L. Fisher, M.D.

Gerald L. Miller, M.D., Kansas City, specialist in obstetrics and gynecology, will succeed Joseph L. Fisher, M.D., St. Joseph radiologist, as President of the Missouri State Medical Association during the organization's 113th Annual Session, April 15-18 at the Chase Hotel in St. Louis.

Dr. Miller's Installation will take place during the annual banquet on Saturday night, April 17. He was chosen as President-elect of the Missouri State Medical Association last year in Kansas City.

The 113th Annual Meeting will open with a session of the House of Delegates at 1:30 p.m. on Thursday, April 15, and conclude with a 7:30 a.m. breakfast session of the House on Sunday, April 18. The House of Delegates also will meet on Friday at 4 p.m. Reference committees will hold open sessions after Thursday's meeting of the House and again on Friday night as is necessary.

Many topics of scientific and economic interest to physicians are on the program for the two-day scientific portion of the annual meeting all day on Friday and again on Saturday.

A general luncheon is scheduled for Saturday noon. The Saturday night banquet will honor the new President of the Association along with new members of the 50-Year Club and Past Presidents of the Association.

The luncheon speaker on Saturday will be the Honorable Richard Ichord, member of Congress from Missouri, who is chairman of the House Internal Security Committee.

The banquet speaker Saturday night will be Russell B. Roth, M.D., Erie, Pa., speaker of the American Medical Association's House of Delegates.

A new feature of this year's annual session will be a new member orientation program on Thursday morning, April 15 in the Tiara Room, 27th Floor, Park Plaza Hotel. A program for the Orientation is printed on page 232 of this edition of MISSOURI MEDICINE.

Dr. Kelley Heads CHP Group

Robert W. Kelley, M.D., St. Louis, an alternate delegate to the AMA from Missouri, has been elected as Chairman of the Missouri Governor's Advisory Council on Comprehensive Health Planning.

MSMA
News

Legislature Considering 1437 Measures

Members of the Missouri General Assembly are currently considering 1437 bills and joint resolutions introduced during the 1971 session. Of this total 369 are Senate Bills, 17 Senate Resolutions, 995 House Bills and 56 House Resolutions. The session ends on June 15.

The following information concerning bills of interest to the medical profession was compiled as of Tuesday, March 16.

The House Public Health Committee has approved a substitute for H.B. 79, the chiropractic act revision measure. The committee substitute removes the "by hand" qualification for examinations by chiropractors which has always been a part of the practice act and would allow chiropractors to "treat the human body by physiotherapy (including light, sound, heat, cold, water or exercise)." It would also allow them to apply first aid and hygiene. It adds "physiotherapy" to the list of subjects for examination of chiropractic applicants.

The bill was opposed in the Public Health Committee hearing by representatives of MSMA, by the Missouri Association of Osteopathic Physicians and Surgeons, by Licensed Professional Physical Therapists and by a number of chiropractors who are opposed to changing their own practice act.

The committee did remove from the bill a section which would have allowed chiropractors to treat the "neuromusculoskeletal system." Also removed was the right to recommend vitamins and mineral products along with the right to "examine, analyze and diagnose the human body by the use of any physical, chemical, electrical, or thermal method and use the x-ray for diagnosis."

The Committee Substitute for the bill is on the House Perfection calendar with approximately

170 bills ahead of it. MSMA opposes any change in the Chiropractic practice act.

Senate Bill 7, which would provide that transactions involving transfusion of blood and transplanting of organs are a service and not subject to an implied warranty, is awaiting a hearing in the House Public Health Committee. The hearing is tentatively set for March 31.

Senate Bill 9 would require physicians, dentists and podiatrists applying for membership on a county hospital staff to provide on written form information concerning training and qualifications and be subject to the board's authority. It puts the professional staff in charge of professional activities. March 31 has been set as the tentative hearing date for this bill in the House Public Health Committee.

Both Senate Bills 7 and 9 have been passed by the Senate.

House Bill 73, which would permit a minor to receive medical treatment without parental consent, has been passed by the House and awaits assignment to a Senate Committee.

House Bill 116, which permits minors between 18 and 21 to donate blood without consent, awaits a hearing in the Senate Public Health Committee. It has passed the House.

Senate Bill 28, a good Samaritan bill, has had a hearing in the Senate Judiciary Committee. No action has been taken.

The House Civil and Criminal Procedures Committee has held a hearing on H.B. 238 which reduces the alcohol level in the blood to indicate whether a driver is intoxicated. No action.

House Bill 785, a broad consent bill for medical procedures, awaits a hearing in the House Public Health Committee.

A Committee Substitute has been prepared for H.B. 95 which would change the statute of limitations in malpractice cases. It

is on the perfection calendar in the House.

Senate Bill 332, which would set up a statewide system of Medical Examiners, awaits a hearing in the Senate Public Health Committee.

The Senate Public Health Committee has held hearings but taken no action on S.B. 280, which raises the salary of the director of the Division of Health, or on S.B. 238, which calls for the licensing of ambulances and ambulance personnel.

A committee substitute has been prepared for H.B. 147 which calls for the licensing of psychologists. The substitute would put such licensing under the Board of Registration for the Healing Arts.

The House Resolutions Committee has held a hearing on House Joint Resolution 39 which is an anti-abortion measure. The committee has taken no action.

A hearing was scheduled for March 22, on a bill which would legalize abortion in Missouri. The measure, H.B. 650, was scheduled to be heard by the House Civil and Criminal Procedures Committee.

Among bills introduced the final week of introduction were: H.B. 952 which calls for the licensing of opticians under the Board of Registration for the Healing Arts and H.B. 958 which would provide immunity for physicians serving in peer and utilization review capacities.

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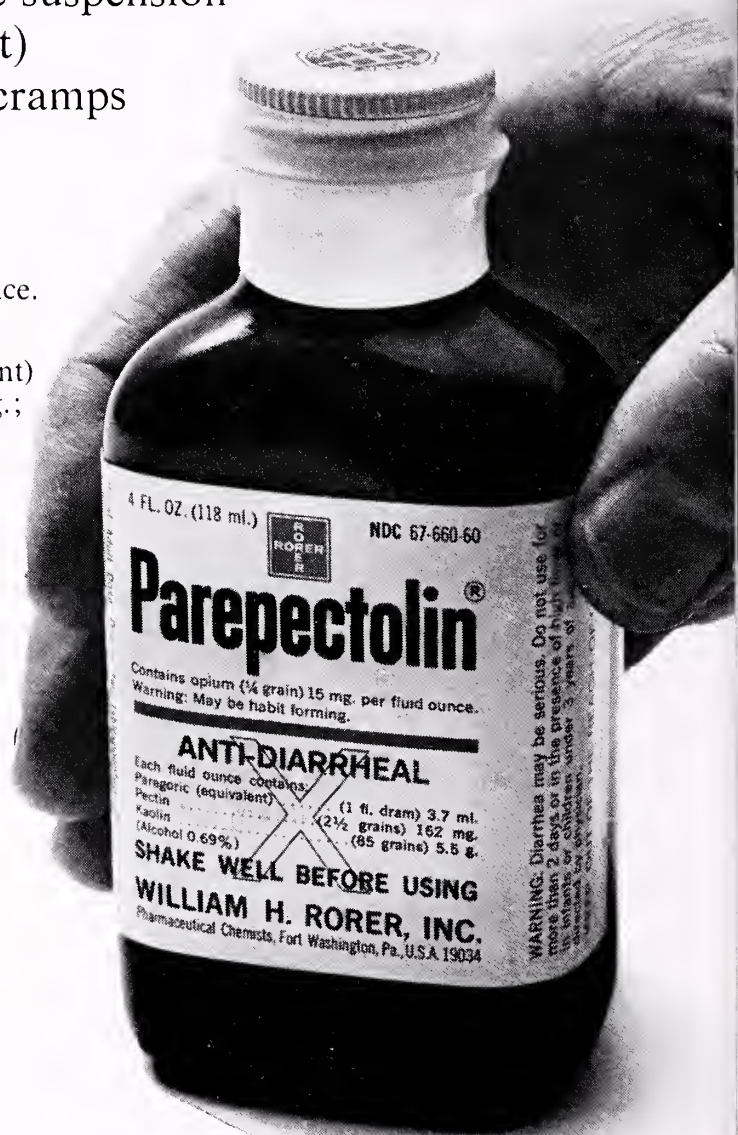
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Infant Mortality

By

BRUCE E. BALFE

Center for Health Services
Research and Development
American Medical Association

MANY STATEMENTS are made regarding the importance and appropriateness of infant mortality rates as measures of the health status of the United States population and of the efficacy of the U. S. health system. Often, comparisons are made with other countries to provide an international context for evaluation; usually the comparison is with Sweden, which has the lowest infant mortality rate as recorded in most statistical sources.

Often, discussion of this subject is emotional and based on inadequate data or erroneous conclusions. A number of points can be made about the infant mortality controversy.

1. The infant mortality rate is not the best or even a good indicator of the health status of a nation or the efficacy of a nation's health delivery system. *Infant mortality is, for the most part, a social rather than a medical problem.* Such factors as poverty, malnutrition, poor housing, low education levels and racial or ethnic differences are surely much more highly correlated with infant mortality than such factors as the number of physicians or hospitals.

2. There are alternative measures which are not necessarily "good" indicators of health status, but which are better than infant mortality for that purpose. Infant mortality loses considerable significance when one considers that 70% of the deaths in the United States are related to heart disease, cancer or stroke (according to the DeBakey Report) and only 2.2% of the deaths are classified as infant mortality (1969 data). This is not to say that anyone should be complacent about infant mortality. However, in choosing an overall indicator of health status or assigning priorities for disease eradication, infant mortality doesn't seem to warrant the attention it receives.

3. If it does not make much sense to use in-

fant mortality as a health status indicator, it makes even less sense to use it as the criterion for international ranking of health status. There are several reasons for this including the following:

a. Statistical comparability is questionable. This subject has been discussed at length in several articles (see references).

b. The implications suggested by the comparisons are invalid. It is generally not stated, but comparison of the U. S. with Sweden, for example, is usually meant to imply that the U. S. should adopt the Swedish health system, social system, or both. Since this is the most common comparison, it is interesting to examine it and extend it to other areas. Consider the following:

- The U. S. has more than 200 million people; Sweden has about 8 million.
- The U. S. covers over 3.6 million square miles; Sweden covers 175,000 square miles or slightly more than the state of California.
- The U. S. has an extremely heterogeneous population measured by any characteristics one might choose: economic, social, cultural, ethnic, etc. Sweden has a relatively homogeneous population.
- Both the U. S. and Sweden are at approximately the same point as far as medical knowledge and technology are concerned.

Given the above points, which country would one expect to have the lower infant mortality rate? The simple fact is that the U. S. has a much larger and more complex problem with which to deal.

Consideration of the implication usually suggested by this comparison is equally absurd; i.e., the U. S. should adopt the Swedish health system or social system or both. By this reasoning, New York City

TABLE 1
MORTALITY RATES FROM SELECTED DISEASES

	Infant Mortality /1000 Live Births 1968	TBC /100,000 1967	Pneumonia /100,000 1967	Bronchitis /100,000 1967	Ulcer of Stomach /100,000 1967
Denmark	15.8	1.7	24.9	17.9	7.0
Finland	13.9	10.3	28.8	9.6	3.7
France	20.4	13.0	19.5	5.2	3.2
West Germany	22.8	10.7	24.3	16.9	7.4
Netherlands	13.1	1.4	11.4	12.2	4.5
Switzerland	16.1	7.8	16.7	8.5	6.0
Japan	15.3	17.7	21.6	5.2	8.6
Australia	17.8	2.3	28.2	21.2	4.7
United Kingdom	18.8	4.2	66.4	57.5	8.0
Sweden	12.9	4.5	51.2	6.3	8.9
United States	20.8	3.5	28.0	3.2	5.0

Source: *World Health Statistics Report*, Vol. 23, Nos. 4, 5, 6, and 8, 1970. *Statistical Abstract—1970*, p. 809.

should adopt the same type of public transportation system as Billings, Mont. because traffic congestion in Billings is much less than in New York City.

4. Hence, it appears that the infant mortality rate is being used to prove a point. Different points can be proven by using the same countries and different disease conditions. For example, using Table 1, one can "prove":

- Sweden has the best health system because it has the lowest infant mortality rate.
- Netherlands has the best health system because it has the lowest death rate due to both tuberculosis and pneumonia.
- The United States has the best health system because it has the lowest death rate due to bronchitis.
- France has the best health system because it has the lowest death rate due to ulcer of the stomach.

Each of the above arguments is equally invalid in and of itself!

5. There are many technical points which can be made concerning the use of infant mortality rates as a general health status indicator. It is unnecessary to go into an extensive technical discussion because the relevant points are these:

- Infant mortality is not a good measure of the health status of a population or the performance of the health delivery system in a country. If it is to be used at all, it

should be used for discussion of a nation's social problems. Even in that context, however, it should not be used alone; it should be used in conjunction with other social indicators.

b. If one is interested in infant mortality as a social problem which can be improved, international comparisons are not particularly useful. *The relevant information is whether the U. S. infant mortality record is improving or deteriorating* (Table 2).

TABLE 2

Year	Infant Mortality Rate
1940	47.0
1945	38.3
1950	29.2
1955	26.4
1960	26.0
1965	24.7
1969	20.7

Statistical Abstract—1970, p. 55.

Obviously, the United States' experience in infant mortality has been improving; indeed, the 1969 rate is less than half the 1940 rate. This is good; it could be better. However, the physicians and other health professionals in the United States should neither be exclusively blamed for the fact that it is not better nor accept exclusive responsibility for the significant improvement that has occurred since 1940.

CONCLUSION

The infant mortality rate has been misused and misinterpreted for some years. It is time to dispel the idea that it is a valid indicator of the health status of the United States population. It is not. If we are to properly evaluate the health status of the population and the efficacy of the health delivery system, a broad set of data, probably summarized into a weighted index, should be used. If such an index can be developed, it should not be used as infant mortality rates should not be used, for fixing blame or delivering praise. Rather, it should be used, by those genuinely interested in improving social conditions in the United States, as a gauge by which to measure progress.

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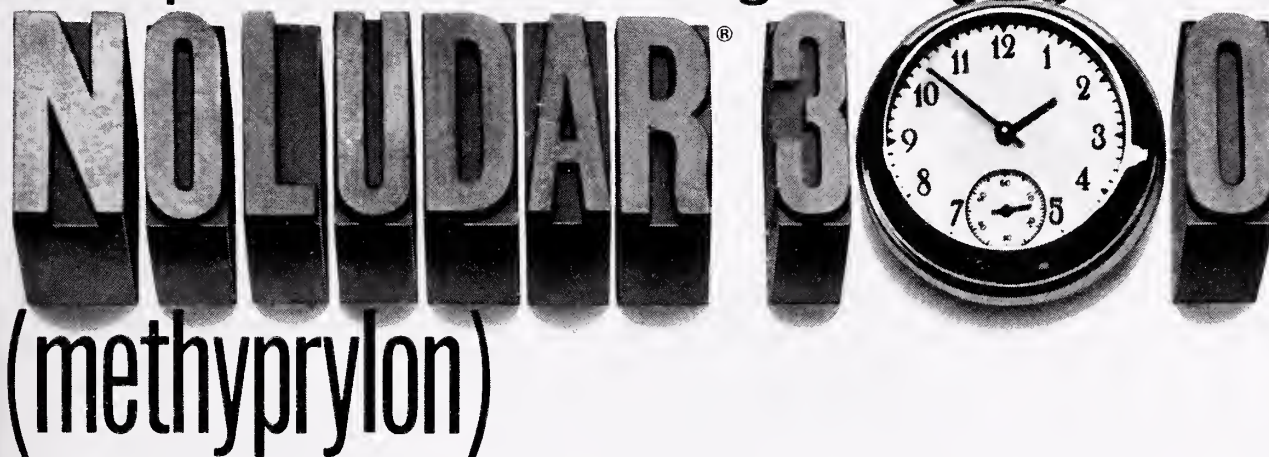
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INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with

withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly in-

crease hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

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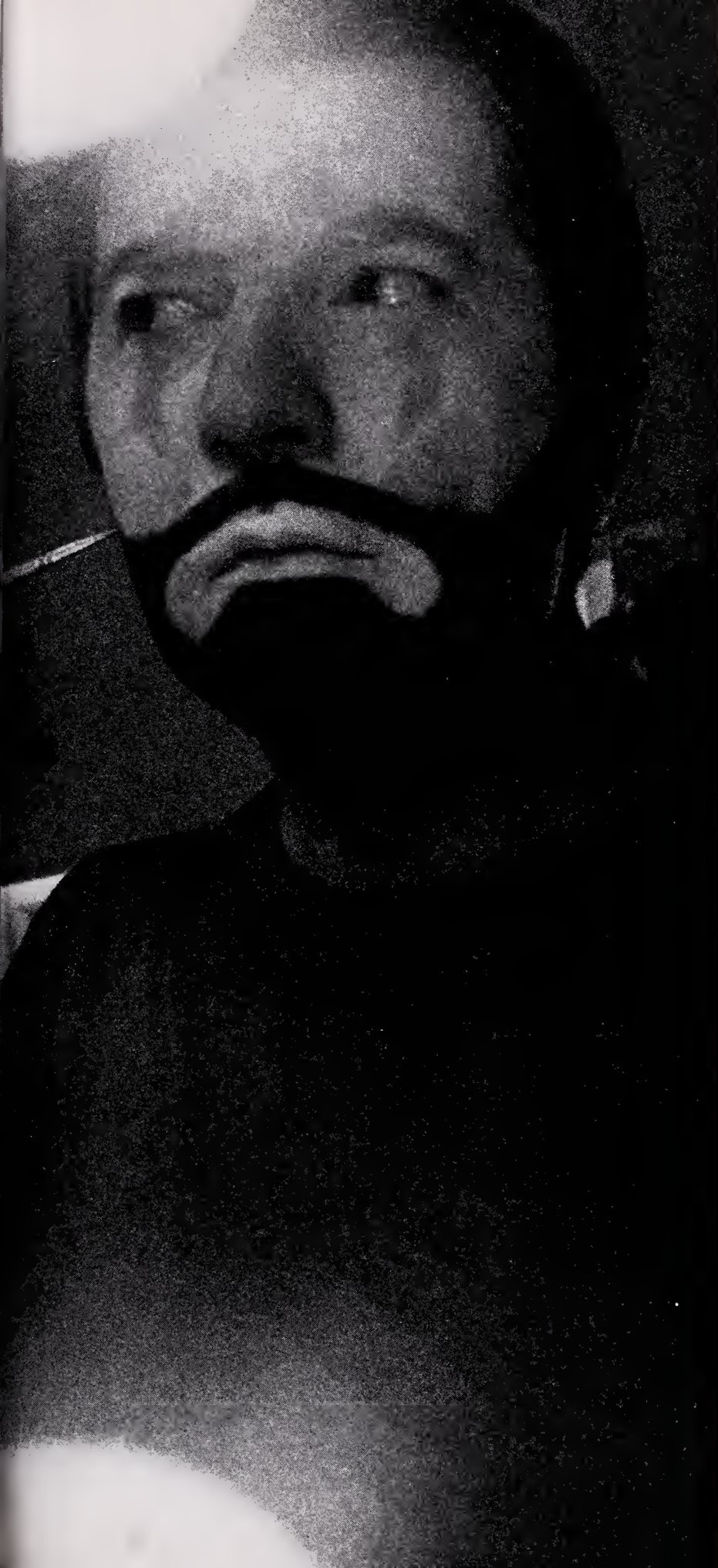
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Pro-Banthine®

(propantheline bromide)

Indications: Peptic ulcer, gastroenteritis, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.

Contraindications: Glaucoma, severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

Dosage: The maximal tolerated dosage is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

Pro-Banthine® 15 mg.

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with

Dartal® 5 mg.

(thiopropazate dihydrochloride)

Indications: Peptic ulcer, spastic constipation, nonspecific gastritis, functional gastrointestinal disorders, pylorospasm, hyperhidrosis, irritable bowel syndrome, mucous or ulcerative colitis, functional diarrhea.

Contraindications: Glaucoma, severe cardiac disease.

Warnings: Pro-Banthine with Dartal should not be administered to patients who are under the influence of barbiturates, alcohol or narcotics. The drug should be administered cautiously to epileptic patients or those in depressed states, patients with liver disease and to pregnant women. Hypersensitivity to Dartal may occur rarely in patients with known sensitivity to similar drugs.

Side Effects: Dryness of the mouth, mydriasis, hesitancy of urination; less commonly extrapyramidal (restlessness, dystonia and signs of pseudoparkinsonism such as muscular rigidity, fixed facies, tremor, ataxia, festinant gait and drooling), parasympatholytic (blurred vision, xerostomia, hypotension, nasal congestion and constipation) and curare-like (loss of control of voluntary muscles, particularly the muscles of respiration) reactions. Rarely, leukopenia or allergic purpura. A generalized erythematous skin reaction may occur. Side effects characteristic of phenothiazines such as grand mal convulsions, altered cerebrospinal proteins, cerebral edema, potentiation of the effects of atropine, heat or phosphorus insecticides, autonomic reactions, endocrine disturbances, reversed epinephrine effect, hyperpyrexia or pigmentary retinopathy may theoretically occur but have not been reported with Dartal. Severe hypotension following recommended doses occurs more commonly in patients who are also afflicted by other medical disorders such as mitral insufficiency or pheochromocytoma, and particular attention should be paid to such a possibility although this has not been observed with Dartal.

Adult Dosage: One tablet three times a day.

Pro-Banthine® 15 mg.

(propantheline bromide)

with

Phenobarbital 15 mg.

Warning: May be habit-forming.

For Indications, Contraindications, Precautions, Side Effects and Dosage see Pro-Banthine. In addition, phenobarbital should be administered with caution to patients with liver disease, mental disturbances or a significant degree of hypoxia.

Pro-Banthine P.A.®

prolonged acting brand of propantheline bromide

For Indications, Contraindications, Precautions and Side Effects see Pro-Banthine.

Dosage Form: Capsule-shaped, compression-coated, peach tablets of 30 mg. for oral use.

Dosage: The recommended initial dosage is one tablet in the morning and one at night.

medical melange

Notes of interest from Here

. . . .

and There

Dr. Robert R. Glynn of Springfield has retired from the active practice of medicine after more than half a century. His associates in the Smith-Glynn-Callaway Clinic, of which he was one of the founders on Jan. 1, 1924, honored him with a retirement birthday dinner in February. They also gave him a copy of a resolution adopted by the Clinic's Board of Directors expressing "profound appreciation . . . for his excellent service" and a polished lucite block into which were cast a pair of his first bandage scissors, the gauge of his first sphygmomanometer and the head of the stethoscope with which he had "examined more than 500,000 chests" when a Colonel in the U. S. Army Medical Corps in World War I.

The spring meeting of the Missouri Medical Alumni organization will be held on April 16 in St. Louis in conjunction with the annual session of the MSMA. **Dr. Henry V. Guhleman**, Jefferson City psychiatrist, is president-elect of the alumni group. He will succeed **Dr. Wilson Snead**, Springfield orthopedic surgeon, in a two-year term as president.

MISSOURI MEDICINE has been informed that **Dr. George X. Trimble**, who recently was appointed medical director of Jackson County Public Hospital in Kansas City, continues to hold his position as medical director of the Catholic Hospitals Medical Education of Kansas City.

Dr. Jerome Parker of the University of Missouri Medical Center in Columbia has been named chairman of the new Missouri Chapter of the American Association on Mental Deficiency. **Dr. William B. Bradley**, superintendent of the Marshall State School and Hospital is chairman-elect. **Dr. Barbara Russell**, Rolla, will serve as section chairman for medicine and **Dr. William Johnson**, Kansas City, is section chairman for education.

Dr. Saul Sugar, ophthalmologist from Detroit, Mich., who will be featured on the scientific program at the MSMA Annual Session in St. Louis on April 17, has twin sons who are Ophthalmology Residents at McMillan Hospital in St. Louis. They are **Dr. Allen Sugar** and **Dr. Joel Sugar**. Dr. Allen Sugar will speak during the afternoon program of the Missouri Ophthalmological Society on April 17.

Dr. James W. Willoughby, Kansas City, has been elected secretary of the North Central Region of the American Association for Clinical Immunology and Allergy.—**Dr. Manit Vajaranant**, obstetrician-gynecologist specialist, has joined the staff of the Ray County Memorial Hospital. He also is on the staff of the Lexington Memorial Hospital and will continue to maintain his office in Lexington.

Dr. Robert M. Ferguson, formerly of Webb City, is now emergency room physician for Freeman Hospital in Joplin. Doctor Ferguson, who has served Webb City residents for the past 25 years, also plans to move his private office to Joplin.—**Dr. George Q. Dunmire** has been reelected president and to the Board of Directors of the Kennett National Bank in Kennett.



WASHINGTON

The American Medical Association's 1971 Medigap national health insurance program was introduced in both chambers of the Congress with more than 100 Democratic and Republican sponsors.

The three chief sponsors again were Sen. Clifford Hansen (R-Wyo.) and Reps. Joel T. Broyhill (R-Va.) and Richard Fulton (D-Tenn.). They and Dr. Russell B. Roth, speaker of the AMA House of Delegates, held a joint news conference on capitol hill in connection with introduction of the legislation (H.R. 4960 and S. 987).

There are two major differences between this Medigap legislation and the bill introduced last year. Catastrophic coverage has been added and the peer review provision dropped because Congress is expected to approve such a program before considering national health insurance.

Medigap would—

- (1) pay the full cost of health insurance for those too poor to buy their own,
- (2) help those who can afford to pay a part of their health insurance premium. The less they can afford to pay, the more the government would help out,
- (3) see to it that no American would have to bankrupt himself because of a long-lasting, catastrophic illness.

The government would pay all of the premium for low-income beneficiaries—an individual and his dependents without any income tax liability. For others, the government would provide scaled participation ranging between 97.5% and 10%, favoring lower-income persons, in the payment of premiums for basic coverage. It would pay in full the premium for catastrophic expense coverage, but there would be a "financial corridor" based on income before such coverage would begin.

A beneficiary eligible for full payment of premium by the federal government would be entitled to a certificate acceptable by carriers for health care insurance for himself and his dependents. Eligible beneficiaries with whom the government would be sharing the cost of premium could elect between a credit against income tax or a certificate.

To participate in the Medigap program, a carrier would have to qualify under state law, provide certain basis coverage, make coverage

available without preexisting health conditions and guarantee annual renewal.

A qualified policy would offer comprehensive insurance against the ordinary and catastrophic expenses of illness. Basic benefits in a 12-month policy period would include 60 days of inpatient care in a hospital or 120 days in an extended care facility. Other basic benefits would provide emergency and outpatient services and all medical services provided by doctors of medicine or osteopathy. The catastrophic expense protection would pay incurred expenses for benefits in excess of the basic coverage, including hospital, extended care facility, inpatient drugs, blood, prosthetic appliances and other specified services.

Under the basic coverage, there would be a deductible of \$50 per hospital stay and 20% coinsurance of the first \$500 of medical expense and on the first \$500 of emergency or outpatient expenses. Under the catastrophic illness provisions, the amount of the "financial corridor" would be based on taxable income: 10% on the first \$4,000, 15% on the next \$3,000 and 20% thereafter.

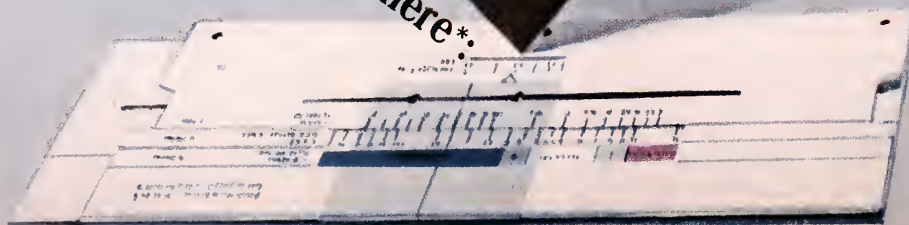
A health insurance advisory board of eleven members, a majority of whom shall be practicing physicians, and including the secretary of Health Education and Welfare and the commissioner of internal revenue, would be appointed by the President with Senate consent. The board would establish minimum qualifications for carriers, and in consultation with carriers, providers and consumers, would develop programs designed to



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Because Euthroid incorporates both active fractions of endogenous thyroid— T_4 and T_3 —it overcomes the need for special interpretation of thyroid function test values.

Moreover, whatever the therapy used, ordinary tests can be thrown off by such factors as abnormal thyroid-binding protein levels, oral contraceptive use and pregnancy. A new method of assessment—the Free Thyroxine Index (FTI)**—helps eliminate these errors. By relating measurements of total and protein-bound T_4 , the FTI indicates your patient's status precisely. And with Euthroid, the precision of your diagnosis is matched by the precision of your therapy.

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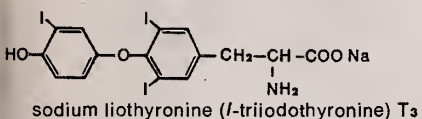
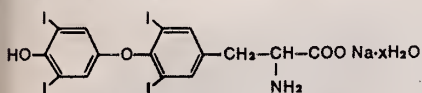
sodium levothyroxine (T_4)
sodium liothyronine (T_3)

*Clark, F., and Horn, D. B.: Assessment of thyroid function by the combined use of the serum protein-bound iodine and resin uptake of ^{131}I -triiodothyronine, J. Clin. Endocrinol. 25:39 (Jan.) 1965.

Euthroid® (liotrix)

Caution: Federal law prohibits dispensing without prescription.

Euthroid is synthetic microcrystalline sodium levothyroxine (T_4) USP and synthetic microcrystalline sodium liothyronine (T_3) USP combined in a constant 4:1 ratio.



Actions: Euthroid provides replacement therapy for the thyroactive material normally supplied by the human thyroid. The normal thyroid gland produces and stores thyroglobulin, the active components of which are two metabolically active hormones: l-thyroxine and liothyronine. Euthroid (liotrix) provides a combination of these hormones in purified, synthetic form, supplied in a constant 4:1 ratio in order to simulate as closely as possible the physiologic and metabolic effects of normal endogenous thyroid secretions.

In contrast with the individual synthetic, metabolically active hormones, Euthroid will usually produce normal results for PBI, T_4 , and other thyroid function tests—consistent with clinical progress—when persons with endogenous thyroid deficiencies are made euthyroid. Sodium liothyronine (T_3) acts more rapidly and for a shorter period of time than preparations of biological origin. Customarily, its use as a single agent produces inappropriately decreased PBI values. Sodium levothyroxine (T_4), on the other hand, is more tightly bound by plasma protein fractions and is somewhat slower acting than sodium liothyronine (T_3); its use as a single agent tends to produce inappropriately elevated PBI values. Euthroid, with its unvarying 4:1 ratio of T_4 / T_3 , permits interpretation of appropriate laboratory tests consistent with the total clinical status of the patient.

Indications: Euthroid (liotrix) provides thyroid replacement therapy in all conditions of inadequate production of thyroid hormones,

namely:

- 1) Hypothyroidism, including cretinism and myxedema.
 - 2) Simple (nontoxic) goiter.
 - 3) Subacute or chronic thyroiditis including Hashimoto's disease.
 - 4) Prevention of goiter in hyperthyroid patients undergoing treatment with thiouracil derivatives.
 - 5) Usage in patients who may manifest intolerance to thyroid products of animal origin.
- Contraindications:** Acute myocardial infarction, adrenal insufficiency, hypersensitivity to any component of this drug.

Warnings: Liotrix should not be used in the presence of cardiovascular disease unless thyroid replacement therapy is clearly indicated. If the latter exists, low doses should be instituted (Euthroid-1/2 or Euthroid-1) and increased by the same amount in increments at 2-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out and adrenal deficiency due to hypopituitarism corrected before liotrix therapy is started.

If hypothyroidism and adrenal insufficiency exist concomitantly, cortisone or similar steroids should be given at dose levels sufficient to correct the adrenal insufficiency before attempting replacement therapy with thyroid hormones.

Likewise, the possibility of alterations in the prothrombin time must be considered and closely monitored in patients on anticoagulant therapy.

Myxedematous patients are very sensitive to thyroid hormones, and dosage should be started at a very low level and increased gradually.

Precautions: Hypothyroid patients are especially sensitive to thyroid preparations, and those with severe hypothyroidism may be unusually so.

Initiation of thyroid replacement therapy in patients with diabetes must be carefully monitored because of potential fluctuation in daily insulin or oral hypoglycemic requirements.

As with all thyroid preparations, this drug will alter the results of thyroid function tests. **Adverse Reactions:** Overdosage or too rapid increase in dosage of thyroid preparations can produce signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Initial dosage should be low and gradually increased at 2-week intervals until the desired clinical response is obtained.

Laboratory criteria of euthyroidism include a PBI of 3.5 to 8 mcg; T_4 , T_3 , and BEI tests are useful.

For most patients, a single daily dose of Euthroid-1, -2, or -3 will maintain euthyroidism. Transfer of a patient from a maintenance dose of another thyroid preparation to Euthroid can usually be effected smoothly. See table for initiating therapy or converting from other thyroid preparations.

Euthroid (liotrix)	Approximate Equivalents			
	Natural	Thyroid USP	T_4 *	T_3 **
Tablet	T_4 */ T_3 ** mcg			
Euthroid-1/2 pale orange	(30/7.5)	1/2 grain	.05 mg	12.5 mcg
Euthroid-1 light brown	(60/15)	1 grain	.1 mg	25.0 mcg
Euthroid-2 violet	(120/30)	2 grains	.2 mg	50.0 mcg
Euthroid-3 gray	(180/45)	3 grains	.3 mg	75.0 mcg

* T_4 =sodium levothyroxine (l-thyroxine)

** T_3 =sodium liothyronine (l-triiodothyronine)

Dosage for cretinism or severe hypothyroidism in children is the same as for adults with myxedema. Eventual maintenance dosage in the growing child may be higher than in the adult.

Overdosage: Symptoms—Headache, instability, nervousness, sweating, tachycardia, and unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm; chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

Treatment—Shock—Supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered. **Supplied:** Square W/C monogrammed tablets of four potencies, each identified by a different color (see table); bottles of 100 and 1000.

E-GP-11-4C



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maintain the quality of health care and the effective utilization of available financial resources, health manpower and facilities.

At the news conference, Dr. Roth said:

"Medicredit offers four important benefits.

"It protects families and individuals from the financial catastrophe that can result from illnesses requiring protracted care. It enables people to receive *federal assistance* for health and medical care. It offers an individual or a head of a family, no matter what his income, the opportunity to select from among *private* medical plans the one best suited to his needs. If he does not like one plan, he can try another. In effect, Medicredit says to everyone, 'Here's some federal assistance. Take it and use it for the sort of health care you want.'

"And Medicredit provides these benefits at a cost estimated at \$14.5 billion for the first year—considerably lower than nearly all other national health proposals. In other words, Medicredit will have a relatively modest impact on the tax increases necessary to finance any national health plan; it will thereby contribute less to the inflationary pressures which plague us all."

The three congressmen each keyed in on one of Medicredit's three main provisions.

"The current federal-state health program for the poor (medicaid) has been sick for a long time," Fulton said. "Some states offer good and adequate medical benefits, others offer substandard medical care and at least two states do not even participate in the program for their citizen poor. . . .

"The time has arrived to standardize the benefits in every state of the union guaranteeing to the poor of every state an adequate level of health care. The voucher system for the poor clearly states that the Federal Government will totally finance the cost of a basic, stated set of minimum benefits to the citizens of every state in the union."

"The tax credit feature of Medicredit is designed primarily to help low income families above the poverty level buy basic coverage health insurance," Broyhill said.

"By giving some tax credit to all taxpayers, the program will provide a strong incentive for all Americans to protect themselves with adequate health insurance.

"We believe that the tax credit provision is a much fairer and more equitable way of helping the near poor and middle income families pay for their health care than under medicaid. . . .

"This feature of Medicredit also will do away with the red tape and bureaucracy of the means

test required under medicaid."

"Medicredit gives every American family the opportunity to protect itself against the cost of a catastrophic illness," Hansen said. "No family would face the prospect of losing its savings or even its home because of medical bills. . . .

"The Senate Finance Committee last year voted 13 to 2—and I voted with the majority—in favor of a similar provision to protect all Americans against the cost of a catastrophic illness. I am confident that the congress will enact such legislation during this session."

It was pointed out that Medicredit deliberately was limited to financing of health care so that it would not be bogged down in details.

"Medicredit was designed to solve the most immediate and most obvious problem relating to medical and health care: making it possible for everyone to seek the attention he needs without regard to his ability to pay," the AMA said.

"However, through the AMA and many others with whom it is consulting, a package of companion programs is now in preparation to help the medical profession, its allies, the government and the people of the nation solve jointly many of the other health-oriented problems facing our nation.

"Those programs which deal with such longer-range problems as the quality of medical and health care, the most efficient utilization of medical and health personnel, the need for additional manpower, the distribution of manpower, the cost of providing care and the need for custodial and home care for the elderly and disabled."

A week before introduction of the Medicredit legislation, President Nixon outlined the Administration's national health insurance program in a special message to Congress.

"Nineteen months ago, I said that America's medical system faced a 'massive crisis,' he said. "Since that statement was made, that crisis has deepened. All of us must now join together in a common effort to meet this crisis—each doing his own part to mobilize more effectively the enormous potential of our health care system."

The Administration program includes a National Health Insurance Standards Act which would require employers to provide basic health coverage for their employees. The minimum benefits would include hospital and physician care, full maternity care, well-baby care, laboratory expenses and certain other expenses. There would be certain deductibles and coinsurance.

(Continued on page 231)

The minimum program would also provide at least \$50,000 in coverage for each family against the costs of catastrophic illness. Under this program employees could elect to be enrolled in a Health Maintenance Organization rather than receive the basic coverage through private carriers. The program would be paid for by the employer, 65 per cent for the first two and one half years, 75 per cent thereafter, and the employee, 35 per cent and 25 per cent. There would be no cost to the federal government.

A second Administration proposal would provide a Family Health Insurance Plan to replace medicaid for poor families. The program would be financed and administered by the federal government. It would provide health insurance to all poor families with children headed by self-employed or unemployed persons whose income is below a certain level, \$5,000 for a family of four. The program would pay all medical costs for families with income below a certain level, \$3,000 for a family of four. As income increases, the family would begin to pay part of the costs through a graduated schedule of premiums, deductibles, and coinsurance.

In order to encourage states to use medicaid funds made available by this bill to supplement the basic program, the federal government would bear the costs of administering a con-

solidated federal-state benefit package. The program would become effective July 1, 1973 and would cost an estimated \$12.4 billion.

Dr. Walter C. Bornemeier, president of the AMA, commended the Nixon Administration for developing "statesman-like" health proposals. He said that, "in overall philosophy and approach," there was "a great deal of common ground" between Medcredit and the Administration program.

"The whole idea of removing the economic barriers to health care for the poor and near-poor has been AMA policy for some time," Dr. Bornemeier said.

"On the matter of insurance against the catastrophic expenses of a long, protracted illness—a medical-health bill that can pauperize a family—we are again agreed in principle.

"The proposal for health insurance to be purchased on a mandatory basis mainly by employers for their employees is an intriguing one. . . .

"We are going to have to take a more detailed look at the proposals on health maintenance organizations (HMO's). Although the Nixon approach is an optional approach, both to doctors and to patients, we are not sure that HMO's represent real solutions to current medical problems. We feel they should be tried on a demonstration basis, and thoroughly researched—as should a number of other delivery methods."

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Special Program For New MSMA Members

Physicians who have recently become members of the Missouri State Medical Association are invited and urged to attend the First Annual New Member Orientation Program from 8:30 AM until 12-noon on Thursday, April 15 in the Tiara Room, 27th Floor, Park Plaza Hotel in St. Louis, prior to the opening of the MSMA 113th Annual Session.

The orientation program for new members is a result of a resolution passed by the MSMA House of Delegates in 1970.

The program for the morning session is as follows:

Thursday—April 15, 1971

- 8:00 AM Registration
- 8:30 AM Welcome—Purpose
*Gerald L. Miller, M.D., Kansas City
MSMA President-elect*
- 8:35 AM A Look at the Missouri Medical Association
*Joseph L. Fisher, M.D., St Joseph
MSMA President*
- 8:55 AM AMA Membership Benefits
*Timothy B. Norbeck, St. Louis
Assistant Director, AMA Field Service*
- 9:15 AM A Look at the County Society
*Richard Bowles, M.D., Liberty
Past President, Clay County Medical
Society*
- 9:35 AM The Health Care Foundation
*Hector W. Benoit, Jr., M.D.,
Kansas City
Chairman, Health Care Foundation
of Missouri*
- 10:05 AM Coffee Break
- 10:20 AM A Look at MMPAC-AMPAC
*Hubert A. Ritter, M.D., St. Louis
Secretary-Treasurer, MMPAC Board*
- 10:40 AM Legislative Situation in Missouri
*John I. Matthews, M.D., Jefferson City
Chairman MSMA Legislative
Committee*
- 11:00 AM The Malpractice Situation
*Norris H. Allen, Defense Attorney,
St. Louis*
- 11:30 AM Question and Answer Session
- 12:00 PM Adjournment

Brief Summary of Prescribing Information—9-9/22/69. For complete information consult Official Package Circular.

Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.

Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhosis. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being pre-diabetic should be kept under close observation if treated with this agent.

Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)

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Preliminary Program
20th Annual Missouri Society Convention

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS

Stouffer's Riverfront Inn, St. Louis

April 17-18, 1971

Presiding: Miss Flora Krueger, President, Missouri Society

Saturday, April 17

- 8:00 AM Registration. (Ballroom Lobby)
- 9:00 AM General Session. (Daniel Boone Room)
Welcome Address: Mrs. Dorothy Johannsmeyer, President, Greater St. Louis Chapter.
- 9:30 AM General Business Session.
- 10:15 AM Coffee Break.
- 10:30 AM Business Session.
- 12:15 PM Luncheon. (Eugene Field Room)
Human Relations in Organizational Work. (Speaker to be announced.)
- 1:45 PM Mini-Test. (Daniel Boone Room)
Administrator: Miss Corrinne Hallquist, CMA, Greater St. Louis Chapter.
- 3:45 PM *Judo and Self Defense for Women*, Officer William Laub, Metropolitan Police Department, St. Louis.
- 6:15 PM Social Hour. (South Ballroom)
- 7:00 PM Banquet (South Ballroom)
Master of Ceremonies, Armand Brodeur, M.D., Professor of Radiology, Cardinal Glennon Hospital, St. Louis.
Entertainment.

Sunday, April 18

- 8:00 AM Registration. (Ballroom Lobby)
- 9:00 AM General Session. (Daniel Boone Room)
Welcome, Falls B. Hershey, M.D., President, St. Louis County Medical Society.
In Memoriam, Mrs. Margaret Scott, Past-President, Missouri Society.
- 9:30 AM *Educational Program*, Miss Dorothy Boeschen, Education Chairman, Missouri Society.
Legal Aspects of Mental Illness, Louis Kohler, M.D., Advisor, Missouri Society.
Communication: How It Affects our Daily Lives, Kenneth Wagner, Administrator, St. Louis Medical Clinic.
- 11:00 AM *Rehabilitation*, Lester E. Wolcott, M.D., Professor and Chairman, Department of Physical Medicine and Rehabilitation, University of Missouri Medical Center.
- 11:45 AM Approval of 1971 Minutes.
- 12:15 PM Luncheon. (Lewis & Clark Room)
Installation of Officers: Lester E. Wolcott, M.D., Installing Officer.
Invitation for 1973 Convention.
Adjournment.

The Greater St. Louis Chapter will be hostess chapter for this meeting.

The AAMA has established a certifying board comparable to the medical specialty boards. One highlight of the State Convention will be the "Mini-Test," which will provide members with an evaluation of their knowledge on selected topics and project their possible performance on a future Certification Examination.

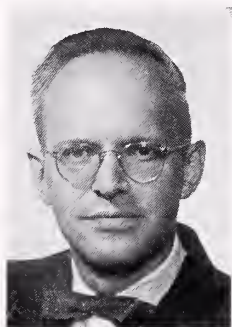
For additional information, please contact Mrs. Blanche Owens, Public Relations Chairman, 941 Cherry, Apt. 306, Springfield, Mo. 65804.

From the Medical Schools



WASHINGTON UNIVERSITY

John D. Vavra, M.D., has been named chief of the Washington University Medical Service at City Hospital, Max C. Starkloff Division. The appointment, which was effective on March 1, 1971, was announced jointly by William H. Danforth, M.D., vice chancellor for medical affairs of Washington University, and R. Dean Wochner, M.D., acting director of health and hospitals for St. Louis.



John D. Vavra, M.D.

Doctor Vavra is an associate professor of medicine, assistant professor of preventive medicine and assistant dean of the School of Medicine. He succeeds Doctor Wochner, who on January 10 replaced Herbert R. Domke, now acting director of the Missouri Division of Health.

As chief of medicine at City Hospital, Doctor Vavra will supervise medical students, interns, residents and attending physicians.

H. Houston Merritt, M.D., a neurologist renowned for his research on epilepsy, was the first Joseph J. Gitt Visiting Professor at Washington University School of Medicine. He spoke on "A Personal Venture in the Treatment of Epilepsy" on February 10, at Clopton Amphitheatre.

Dr. Merritt is best known for developing hydantion sodium, a drug widely used to treat epilepsy, a nervous disorder causing convulsions or unconsciousness. He is Moscs Professor Emeritus of Neurology and Vice-President Emeritus in Charge of Medical Affairs at Columbia University College of Physicians and Surgeons, New York, N. Y., where he was Dean of the Faculty of Medicine until last year.

The visiting professorship honors the late St. Louis physician Joseph J. Gitt, a 1930 graduate of Washington University School of Medicine. Doctor Gitt was assistant professor of clinical neurology at the time of his death in 1969.

Dr. Francis H. C. Crick, Nobel laureate and

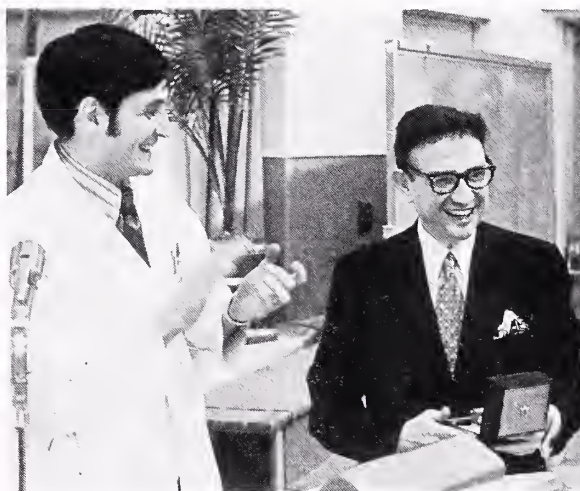
head of the Department of Molecular Genetics at Cambridge University, England, delivered Washington University's Evarts A. Graham Memorial Lectures on February 24 and 25. His subjects were "Why I Study Biology" and "Positional Information in Biological Tissues."

Doctor Crick and his colleagues, Dr. James D. Watson and Dr. Maurice H. F. Wilkins, won the 1962 Nobel Prize in Medicine-Physiology for defining the chemical structure of the DNA (deoxyribonucleic acid) molecule. Although there was already evidence that inheritable information was encoded in the DNA molecule, this long-sought information about DNA's actual structure helped explain how it may function in passing its genetic material from cell to cell.

ST. LOUIS UNIVERSITY

Dr. Theodore Cooper, director of the National Heart and Lung Institute of the National Institutes of Health and a medical alumnus and former faculty member at the St. Louis University School of Medicine, delivered the first lecture sponsored by the St. Louis University Housestaff Organization on February 23.

Following his address titled, "National Needs and Advances in Coronary Artery Disease,"



Dr. Theodore Cooper (right) accepts watch presented by Dr. Daniel Brennan.

Doctor Cooper was the recipient of a watch, a gift of the Organization composed of 164 residents and interns at the St. Louis University Hospitals. Dr. Daniel Brennan, president of the group, made the presentation.

In his address and at an earlier news conference, Doctor Cooper stressed that if you have high blood pressure, an elevated cholesterol count and smoke a pack of cigarettes a day and are an American man under the age of 65, the chances of a heart attack are five times greater. He said that diet is more important than medicine in the beginning, before the heart attack, as preventive medicine.

In discussing the artificial heart program, Doctor Cooper said the most important scientific problem at the present time is the lack of a suitable material with which to construct the heart, which would be structurally satisfactory for long periods of time in the human body. He emphasized that this does not mean there has not been development and research and new ideas, adding that there is progress being made in this area.

Dr. Henry Pinkerton, professor and director emeritus of the Department of Pathology, was honored in ceremonies held to dedicate the Pinkerton Room in the Pathology Department at the School of Medicine. The new library-conference room will be used by pathology faculty and students. A plaque inscribed with Doctor Pinkerton's name was placed outside the area and his portrait was hung in the room. Doctor Pinkerton was honored by his colleagues and friends. The distinguished scientist is actively engaged in research in the virus-cancer field.

Dr. Thomas F. Frawley, professor and chairman of the Department of Medicine, presided at the Missouri Meeting of the American College of Physicians and the Missouri Society of Internal Medicine held at the University of Missouri in Columbia on February 26-27.

Dr. Maurice Green, director of the Molecular Virology Institute, has been invited to participate in a symposium on the Structure and Function of Nucleic Acids, sponsored by the Canadian Biochemical Society and the Chemical Institute of Canada. The symposium will be held in Banff, Alberta, Canada on February 28-March 4.

Dr. William L. Nyhan, professor and chairman of the Department of Pediatrics, University of California, San Diego, will deliver the 26th annual Hanau W. Loeb lectureship sponsored by the Alpha Pi Chapter of Phi Delta Epsilon fraternity on April 22 at 12-noon in Glennon Hall. The title of his lecture is "Inborn Errors of

Purine Metabolism and the Development of the Central Nervous System." Interested physicians are invited to attend the lecture.

Dr. Eli R. Shuter, assistant professor of neurology in the Section of Neurology, was the recipient of a \$34,852 grand award from the U. S. Public Health Service for his research titled, "Hexosaminidases in the Central Nervous System." The hexosaminidases are enzymes which in the brain are believed to take part in the normal breakdown of complex fats. Decreased amounts or complete absence of brain hexosaminidases have been found in several diseases in which abnormal quantities of these fats accumulate in brain cells.

UNIVERSITY OF MISSOURI

Dr. William H. Beierwaltes, professor of medicine and chief of the Section of Nuclear Medicine at the University of Michigan Medical Center, visited the Medical Center on March 8 to lecture and to serve as a consultant in nuclear medicine to the Department of Radiology regarding current efforts to expand the nuclear medicine service at University Hospital.

A leading figure in the development of nuclear medicine, one of the most rapidly growing fields in relation to patient care and new techniques of diagnosis, Doctor Beierwaltes also spoke to Medical Center staff and residents on "Progress and Prospects in the Radiopharmaceutical Diagnosis and Treatment of Cancer."

"The potentiality for growth in nuclear medicine at UMC is very great," Dr. Gwilym S. Lodwick, professor and chairman of the Department of Radiology, said. "The facilities critical to this growth are already present at the University."

Examples of those facilities are the nuclear reactor which could produce the radioactive drugs used in nuclear medicine, the total body counting facility which measures the body content of certain isotopes and the interdisciplinary research in image analysis already underway between the Department of Radiology and the College of Engineering.

Nuclear medicine, which involves the use of radioactive materials and methods in the diagnosis and treatment of a variety of diseases, particularly cancer, has been a section of the Department of Radiology since 1957. Dr. Lewis Garrotto, assistant professor of radiology, is acting chairman of the Section.

Dr. J. Donald Smiley, professor of medicine, University of Texas Southwestern Medical School, Dallas, gave two lectures on March 12

at the University of Missouri-Columbia Medical Center. He spoke on "Local Immune Aspects of Chronic Disease Processes" at a Department of Medicine seminar and discussed "Immune Aspects of Rheumatoid Arthritis" at a meeting of the St. Louis Rheumatism Society.

Doctor Smiley also spent time at the Medical Center accompanying the staff on hospital rounds on March 12-13.

A prominent rheumatologist, Doctor Smiley's research involves studies of the immune mechanisms relative to arthritis and other inflammatory diseases. In recognition of his work, he has received a Research Career Development Award from the United States Public Health Service.

Dr. Thomas D. Luckey, professor of biochemistry at the School of Medicine, is one of three guest editors of *Intestinal Microflora*, published by the *American Journal of Clinical Nutrition*. The subject is the trillions of bacteria and other microscopic life which inhabits the intestinal tract of each person.

The first section records the proceedings of the first international symposium on "The Ecology of the Intestinal Flora in a Changing Environment," which was held at UMC last March. Topics covered at that time included the intestinal microbes present in man; their interaction with each other and with man and animals; and the effects on them of antibiotics, diet, and bioisolation. The second part consists of reports of recent studies on intestinal disease in man and its relation to the bacterial flora.

It is only recently that the importance of comparative studies of intestinal flora to various disciplines has begun to be realized. The information presented in the symposium edition forms a base for knowledge in this area that should be of interest to physiologists, microbiologists, nutritionists, veterinarians and physicians.

An expert on gnotobiology (the study of life under germ-free conditions), Doctor Luckey has a paper in the symposium which brings some of his experience in this field up to date. His first book in this area, published in 1963, received wide acclaim.

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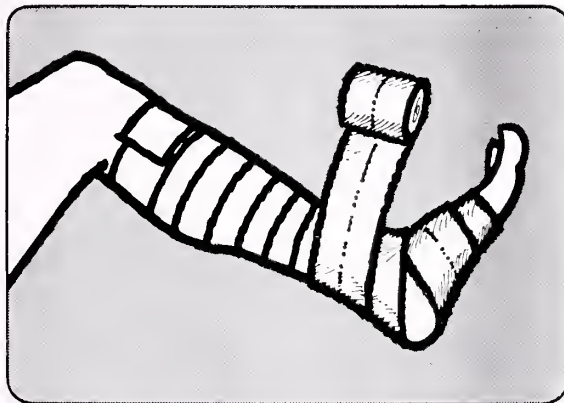
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NOTE: Not recommended during the acute recovery phase following myocardial infarction. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.

Contraindications: Known hypersensitivity. Should not be given concomitantly with or within at least 14 days following the discontinuance of a monoamine oxidase inhibitor. Then initiate dosage of amitriptyline HCl cautiously with gradual increase in dosage until optimum response is achieved. Not recommended during the acute recovery phase following myocardial infarction or for patients under 12 years of age.

Warnings: May block the antihypertensive action of guanethidine or similarly acting compounds. Should be used with caution in patients with a history of seizures or urinary retention, or with narrow-angle glaucoma or increased intraocular pressure. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. Safe use during pregnancy and lactation has not been established; in pregnant patients, nursing mothers, or women who may become pregnant, weigh possible benefits against possible hazards to mother and child.

Precautions: When used to treat the depressive component of schizophrenia, psychotic symptoms may be aggravated; in manic-depressive psychosis, depressed patients may experience a shift toward the manic phase, and paranoid delusions, with or without associated hostility, may be exaggerated; in any of these circumstances, it may be advisable to reduce the dose of amitriptyline HCl, or to use a major tranquilizing drug, such as perphenazine, concurrently.

When given with anticholinergic agents or sympathomimetic drugs, close supervision and careful adjustment of dosages are required. May enhance the response to alcohol and the effects of barbiturates and other CNS depressants. The possibility of suicide in depressed patients remains during treatment and until significant remission occurs; this type of patient should not have easy access to large quantities of the drug. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.

Adverse Reactions: *Note:* Included in this listing are a few adverse reactions not reported with this specific drug. However, pharmacological similarities among the tricyclic antidepressant drugs require that each reaction be considered when amitriptyline is administered.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. **CNS and Neuromuscular:** Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms. **Anticholinergic:** Dry mouth, blurred vision, disturbance of accommodation, constipation, paralytic ileus, urinary retention, dilatation of urinary tract. **Allergic:** Skin rash, urticaria, photosensitization, edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. **Gastrointestinal:** Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, parotid swelling. **Endocrine:** Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female, increased or decreased libido. **Other:** Dizziness, weakness, fatigue, headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, drowsiness, jaundice. **Withdrawal Symptoms:** Abrupt cessation of treatment after prolonged administration may produce nausea, headache, and malaise; these are not indicative of addiction.

How Supplied: Tablets containing 10 mg and 25 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100, 1000, and 5000; tablets containing 50 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100 and 1000; for intramuscular use, in 10-cc vials containing per cc: 10 mg amitriptyline HCl, 44 mg dextrose, and 1.5 mg methylparaben and 0.2 mg propylparaben as preservatives.

For more detailed information, consult your MSD representative or see the *Direction Circular*. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

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Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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J. JOSEPH MARR, M.D., St. Louis

Recent Developments in the Treatment of Infectious Diseases

Part I. Management of Urinary Tract Infections

INFECTIONS OF THE URINARY TRACT are among the most frequent problems treated by the physician. Yet their propensity to recur despite seemingly adequate therapy makes them a most vexing problem in an office practice. These recurrences generally are due to reinfection by a different organism except when an anatomic or functional abnormality of the urinary tract is present. In these latter instances, recurrence usually is due to the persistence of the original organism which has maintained itself in the renal parenchyma to emerge within a few weeks after chemotherapy has been discontinued. Therefore, it is of some importance to know if there is renal involvement or whether the infection is confined to the lower tract. Numerous studies carried out in the past ten years have shown that the risk of pyelonephritis varies markedly with the particular group of persons studied. As a result, it has become possible to predict with some confidence the probable pathology and natural history of the disease in an individual.

POPULATIONS AT RISK

The majority of urinary infections occurs in women. The incidence increases in a linear fashion with age, beginning in adolescence, until the sixth decade when there is a more rapid

increment. In men, the situation is quite different, the incidence being relatively low until the sixth decade when prostatic hypertrophy and the attendant obstruction bring about a steep increase in the number of cases. Infections in men under the age of 50 are uncommon and imply anatomic or functional anomaly of the genitourinary system.

However, there are two groups of individuals who deserve particular attention by the practitioner of medicine; these are children and pregnant women. The common denominator between them is asymptomatic infection.

Large-scale studies in various areas of the world have documented the prevalence of asymptomatic bacteriuria. It may, indeed, be one of the most common infections of the European and American populations. The investigations of Kunin and co-workers¹ have shown that schoolgirls have a 5% incidence of bacteriuria. The significance of this finding is underscored by the fact that about 14% of those with infection showed caliectasis and 19% ureteric reflux. Other studies by Smelli *et al*² have demonstrated renal scarring in infected children, with a resumption of kidney growth following adequate therapy. The evidence at this time indicates that young girls with bacteriuria,

whether symptomatic or not, should be adequately treated and followed with repeated urine cultures for a year in order to be certain of a cure. The corollary to the above is that bacteriuria in young boys is of even more importance. The investigations cited above, as well as others,³ have confirmed that bacteriuria in this group is rare, but that when it does occur it is almost invariably associated with an anatomic abnormality and some degree of obstruction. Management of young boys with a urinary tract infection requires adequate chemotherapy and subsequent urologic investigation to determine if a correctable abnormality exists.

During pregnancy, as many as 5% to 7% of women will have asymptomatic infections; an additional 1% to 2% will develop bacteriuria during gestation, usually in the last trimester.⁴ A significant number of these women will develop symptomatic pyelonephritis, either during the pregnancy or within a few months postpartum. Several controlled studies of treated and placebo-treated subjects have demonstrated a 20% to 45% incidence of pyelonephritis in the placebo group^{5, 6} as compared to less than 5% in the treated group. An additional 10% to 15% will develop pyelonephritis postpartum. Moreover, there is an increased incidence of abortions and prematurity among pregnant women with asymptomatic infection and a higher incidence of hypertension and chronic renal disease later in life.⁷ It is reasonable to conclude that screening for bacteriuria should be done early in pregnancy and continued throughout the period of gestation. When found, it should be treated vigorously with the least toxic drugs available, whether symptoms are present or not. Finally, patients found to have infections should be followed with several urine cultures after delivery and treated if bacteriuria returns. This last point should not be overlooked since 50% to 80% of untreated women will have persisting bacteriuria during the year following delivery.^{8, 9} Of those who are treated and whose urine is cleared of organisms during the pregnancy, about 20% will have a recurrence during the next two to four years.¹⁰

In summary, although there is insufficient evidence to establish a casual relationship between asymptomatic bacteriuria and chronic renal disease, hyposthenuria, radiologic evidence of pyelonephritis, and bacteremia, such an association is likely. There is, nevertheless, adequate documentation of the causative role of asymptomatic bacteriuria to reversible radio-

graphic renal lesions, pyelonephritis of pregnancy and postcatheterization bacteremia.¹¹

DEMONSTRATION OF SIGNIFICANT BACTERIURIA

The demonstration of bacteria in a single, unspun clean-voided urine specimen is not sufficient evidence on which to initiate therapy, since many persons with this finding will have sterile urine on subsequent cultures. However, if 100,000 organisms per milliliter are cultured on two or three successive attempts, then the person must be considered as being infected whether symptoms are present or not. If organisms are seen in an unspun clean-voided urine using the high power objective, then there are about 100,000 organisms per milliliter. Examination should be carried out immediately after obtaining the specimen since contaminants may overgrow the causative organism or give a false impression of an infected urine when there were but few organisms present at the time of voiding. Casts will also break apart if the urine is allowed to stand. Culture of the urine is the most important diagnostic procedure and should be performed as rapidly as possible. For proper therapy, the causative organism should be identified and antibiotic susceptibility studies done.

Because of the great variability in sensitivity to antimicrobial agents, general rules may not be applicable. Optimal results will be obtained by employing the drug dictated by antibiotic sensitivity testing of the patient's own organism. Some guidelines for therapy are presented below.

THERAPY OF URINARY TRACT INFECTIONS

Infections of the urinary tract may be conceptually divided into those involving the upper tract (kidney) and the lower tract. Either form may be additionally described as simple or complicated, the latter term generally implying a chronic or recurrent infection. Simple infections, most of which are asymptomatic, respond quickly and easily to therapy. Chronic or recurrent infections are almost never permanently eradicated and are frequently associated with an anatomic abnormality, e.g., calculus, stricture, reflux. Most chronic infections will be associated with obstruction of the lower or upper urinary tract, instrumentation, indwelling catheters or neurogenic bladder dysfunction with a significant residual. The most common pathogen is *E. coli*, accounting for 80% to 90% of all infections. Chronic infections may be due to *E. coli*, frequently resistant to most antibiotics, but also to

a variety of other Gram-negative organisms as well, notably *Klebsiella-Areobacter* species, *Proteus*, or *Pseudomonas*. Gram-positive organisms account for less than 10% of all infections.

A. Asymptomatic bacteriuria and acute or recurrent simple infections.

1. *Lower urinary tract.* These are most frequently caused by *E. coli* or *Proteus mirabilis* sensitive to most antimicrobial agents. The agents of choice are the sulfonamides because of their low cost, efficacy and absence of significant side effects. They have the additional benefit of being nontoxic to the fetus and, therefore, very acceptable for treatment of asymptomatic bacteriuria of pregnancy. Despite a wide antibacterial spectrum, they seldom produce an imbalance of intestinal flora and diarrhea. The antibacterial differences among the sulfonamides are slight, so that the choice depends to a considerable degree upon the rate at which the drug is acetylated and excreted. Sulfisoxazole (Gantrisin) is the single agent most often used and probably is the most effective. In 24 hours, about 95% of the drug will be excreted in the urine and only a third of this will be acetylated. Thus, the major portion remains in the active form, making this the most soluble of the sulfa drugs. The inactive acetylated derivative tends to crystallize in an acid urine and may produce obstruction; for this reason the urine should always be alkalinized when sulfonamides are given.

Triple sulfa mixtures take advantage of the fact that each drug behaves as though it were in solution alone with respect to its solubility, yet the antibacterial effects are additive. This combination was designed to circumvent the problem of crystalluria, but probably is not superior to sulfisoxazole alone. The usual course of therapy is ten days and may be repeated if the infection recurs. A repeat culture and sensitivity testing should be done at the third or fourth day of treatment to be certain that the drug is effective. The use of the long acting sulfonamides, such as Kynex, Midicel and Madribon, has been associated with serious toxic and hypersensitivity reactions and cannot be recommended.

A valuable alternate agent that is relatively nontoxic is nitrofurantoin (Furadantin). Blood concentrations are very low, but bacteriocidal concentrations are attained in the urine and the renal lymph as well. In contrast to the sulfonamides, acidification of the urine aids antibacterial activity. Most organisms are sensitive

Special Series

MISSOURI MEDICINE is privileged to publish this series of articles on recently released antibiotics and the newer approaches to therapy of infectious diseases. The accompanying introductory article deals specifically with four newer antimicrobial agents, namely, carbenicillin, gentamicin, cephaloglycine and cephalexin.

Doctor Marr is Assistant Professor in the Department of Internal Medicine, Washington University School of Medicine and is with the University's Unit I Medical Service at St. Louis City Hospital. He recently was engaged in rewriting the "Antimicrobial Agents and Infectious Diseases" section of the *Manual of Medical Therapeutics*, which is published by Little, Brown and Co. and is distributed nationally.

Doctor Marr's second article will deal with alternative drugs to penicillin which are useful in the treatment of Gram-positive coccal infections. Particular emphasis will be given to vancomycin which is emerging as a useful agent in treating penicillinase-producing staphylococci and in enterococcal infections.

to the drug, with the exception of *Pseudomonas* species. The usual dosage is 100 mg to 150 mg four times a day. Nitrofurantoin may produce a brown color in the urine, and patients should be told to expect it. The drug is best avoided when renal insufficiency is present; a polyneuritis has been described under conditions in which significant concentrations accumulate in the blood.

When primary treatment with the above drugs fails, then penicillin G, ampicillin or tetracycline may be used. Penicillin G administered in doses of 800,000 units every six hours will effect a urine concentration of 100 $\mu\text{g/ml}$; it is an extremely safe drug and worthy of a trial when sensitivities are equivocal, since concentrations may be achieved in the urine which are far higher than those obtained in disc sensitivity testing. Ampicillin may be given as a 500 mg dose every six hours. Tetracycline should be avoided in the treatment of asymptomatic bacteriuria of pregnancy because of its effects on the fetus and the occasional instances of liver necrosis seen in pregnant women. This latter

complication is usually a result of intravenous therapy. Usual dosage is 1 gm to 2 gm per day in a four-times-a-day regimen.

Failure of the above in an infection caused by a sensitive organism is generally an indication of an anatomic abnormality of the urinary tract or renal parenchymal infection or both.

2. *Upper urinary tract (acute pyelonephritis).* In the presence of clinical evidence of acute pyelonephritis, consideration must be given to the concentration of the drug in the renal tissue, as well as that in the urine. This is a topic of considerable controversy, but some promising data have emerged from cannulation of the renal lymphatics in animals and determinations of the antibiotic concentrations therein. However, at this time the choice of an agent still must be based upon the accumulated clinical experience with acute pyelonephritis. The agent selected should be bacteriocidal since organisms residing in the renal medulla are metabolizing slowly and, perhaps, partially protected from the immune response by the inactivation of the fourth component of complement due to the high concentration of ammonia. Intramuscular ampicillin, 500 mg every six hours, would appear at this writing to be the agent of choice since high blood and urine concentrations are obtained. The majority of cases of acute pyelonephritis are due to *E. coli* which is sensitive to ampicillin in adequate dosage. If the organism is resistant to the drug, it may be treated with one of the agents described in the following section.

B. Chronic recurrent urinary tract infections.

Chronic bacteriuria can arise by diverse methods. Bladder dysfunction and urine retention may allow persistence of bacteria, and infections established in the prostate or in the paraurethral apparatus in the female may result in recurring infection. The typical patient with chronic bacteriuria is a woman who has had episodes of reinfection over a period of years; the source is usually *E. coli* from the feces. These strains are generally sensitive to most antibiotics. A recent study of 89 women who suffered from chronic bacteriuria for a mean duration of 12 years¹² showed that about half of them had renal involvement each time the urine became infected. This conclusion was based on the finding of elevated antibody titers to the infecting organism. Radiologic investigation indicated that significant renal changes had occurred in half of these individuals. Thus, the situation in adult women is somewhat analogous to that in schoolgirls,

although the etiologic factors of reflux and progressive scarring have not been shown to be operable in the former. Each episode of infection in the adult is due to reinfection (as opposed to recurrence) and suggests an impairment of the defense mechanisms of the lower tract. Chronic bacteriuria in the older man does not appear to have the same origin and is less likely to cause renal damage. The most frequent predisposing factor is obstructive uropathy, usually due to prostatic hypertrophy. A study by Freeman *et al*¹³ showed that whereas infections in women and children were almost always due to *E. coli* and *Proteus mirabilis*, only 34% of males with chronic bacteriuria had *E. coli* as the causative organism. This suggests that the organism was acquired in the hospital, perhaps following instrumentation or surgery.

The decision as to which patients with chronic urinary tract infections should be treated is still a matter of some dispute, since there is no agreement regarding how often chronic bacteriuria confined to the lower tract ascends to involve the kidney. However, experience with bacteriuria of long duration in adult women has shown that chronic active pyelonephritis and renal damage are frequent concomitants. Treatment of this group, therefore, is indicated. As mentioned above, this sequence also has been shown to occur in children and pregnant women; therapy is mandatory. Bacteriuria in elderly men is often benign and at this time there is little evidence to support the view that long-term prophylaxis prevents renal deterioration in these patients. Caution would dictate, however, that elderly men (or anyone) with a debilitating disease should be treated lest Gram-negative bacteremia supervene.

The following is a consensus view of modes of therapy for chronic bacteriuria. Recurrent infections should be treated with an antibiotic demonstrated to be efficacious by culture and sensitivity testing. The agent should be bacteriocidal and the length of therapy should be ten to 14 days. Current evidence^{14, 15} indicates that prolongation of therapy for as many as six weeks does not improve the result. Ampicillin, as described above, often will be adequate; however, in these situations (especially in men) resistant organisms will occasionally exist and require more intensive therapy. Alternate drugs which may be used are as follows:

colistin, 2.5-5 mg/kg in divided doses
kanamycin, 10-15 mg/kg in divided doses
polymyxin B, 1-1.5 mg/kg in divided doses.

After treatment of the recurrences, patients who have had more than three or four reinfections should be placed on long-term suppressive therapy. Although nitrofurantoin has been used, mandelamine is probably a more suitable agent. The rationale for long-term suppressive therapy lies in the observation that the kidney has the capacity to rid itself of Gram-negative bacteria over a few weeks as long as it is not continually reinfected via ascending spread from the bladder. The value of mandelamine is due to the fact that organisms do not become resistant to it (as in the case of the antibiotics mentioned above) and it renders the urine an unsuitable medium for growth. Mandelamine is the methoxamine salt of mandelic acid, both of these compounds being bacteriocidal. The former liberates formaldehyde in an acid urine and the latter is intrinsically effective. The usual dose is 1 gm four times a day. Since the urine must be acid for the drug to be effective, ascorbic acid (1 gm four times a day) generally is given along with it. Cranberry juice also may be used as an acidifying agent, although it is necessary to drink several glasses a day.

NEWER ANTIMICROBIAL AGENTS

1. *Carbenicillin*. The antibacterial spectrum of this penicillin is similar to that for ampicillin; however, it has the decided advantage of being effective against *Pseudomonas aeruginosa* and *Proteus* species resistant to ampicillin. It is not efficacious against *Klebsiella* and is less active against Gram-positive cocci than other penicillins. The drug is not absorbed to any appreciable degree when given orally; intramuscular injections give peak serum concentrations in one hour. The major use of carbenicillin is in the treatment of urinary tract infections. Its place in systemic infections with *Pseudomonas* will not be discussed here. Its pharmacologic attributes are those of the other semisynthetic penicillins and it may be used in the presence of renal failure, since this is a relative contraindication to the use of the polymyxins and aminoglycoside antibiotics.

Depending upon the preparation of carbenicillin, it may contain from 4 meq to 7 meq of sodium per gram, which may be of significance in persons with renal impairment or cardiac failure. The usual dose for urinary tract infections is 1 gm every six hours. Since resistance to this agent develops rapidly, especially when the dosage is inadequate, it should be reserved for the treatment of infections due to *Pseudomonas*

or *Proteus* resistant to other antibiotics or when deteriorating renal function has become a significant factor in the management of the patient.

2. *Gentamicin*. The activity of this new agent extends to all of the Gram-negative organisms of clinical interest and, at this time, it is effective against more hospital pathogens than any other single antibiotic. In order to minimize the appearance of resistant strains, it should not be used unless absolutely indicated. Its primary clinical value is in the treatment of infections due to *Proteus* and *Pseudomonas*. Very high levels may be obtained in the urine at doses of 0.5-1.0 mg/kg divided into a three-times-a-day regimen. As with the other aminoglycoside antibiotics (streptomycin, kanamycin), alkalization of the urine is important since the effectiveness of the drug increases markedly as the pH increases. Since there is no major extra-renal route for excretion, it must be administered cautiously in the presence of renal failure. Clinical isolates resistant to the other aminoglycoside antibiotics usually do not display resistance to gentamicin.

3. *Cephaloglycine* and *Cephalexin*. Both of these agents represent an attempt to combine the side chain of ampicillin with the nucleus of a cephalosporin in order to gain the advantages of both drugs. Only the former is available commercially at this time. The latter, however, appears to hold more promise on the basis of experimental studies and undoubtedly will replace cephaloglycine. Both are cephalosporins and their advantage lies in the fact that they may be administered orally. They are useful only in the treatment of urinary tract infections; about half of an ingested dose appears in the urine within two hours. Cephaloglycine deteriorates rapidly under alkaline conditions so the urine must be acidified.

PREVENTION OF URINARY TRACT INFECTIONS

These are the most frequent hospital acquired infections and are nearly always associated with instrumentation or catheterization. At times, catheters are indispensable for therapy, but the indications should be quite clear. They should always be placed using aseptic technique and removed as soon as possible. Repeated catheterizations are preferable to an indwelling catheter. When an indwelling catheter is required, the incidence of significant infection will be lessened if a triple-lumen catheter is employed and the bladder is continuously irrigated with a solution of 40 mg neomycin and 20 mg polymyxin per

liter of normal saline. An alternate method, though less effective, is the use of a closed urinary drainage system with a disposable, sterile bag and spigot attachment to permit semipermanent use. The catheter is not irrigated unless obstruction is suspected. Bags are drained with care being taken not to contaminate the spigot. After a catheter is removed, a urine culture must be obtained and treatment instituted for significant bacteriuria.

MANAGEMENT OF URINARY TRACT INFECTIONS IN OFFICE PRACTICE

Based on the foregoing discussion, the following guidelines are suggested for the evaluation and treatment of the "average" patient with a urinary tract infection:

1. Treat the first episode for a brief period of time (seven to 14 days).
2. Look at the urine two or three days after treatment has begun to determine if therapy is effective. Examine it again a week or two after therapy has ceased. Treat again, if necessary.
3. After three or four recurrences, long-term prophylaxis should be instituted.
4. Urologic evaluation is carried out on all children below the age of 12 years after the treatment of the first episode. The cystogram frequently is more useful than the intravenous pyelogram in these patients. Retrograde catheterization studies and other procedures generally are not done unless unusual findings on cystoscopy or pyelography warrant them.

Urologic evaluation also should be done on men under the age of 50 who have significant bacteriuria.

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A primary course in **Functional Corrective Surgery of the Nasal Septum and External Pyramid** will be offered on Aug. 20-31, 1971 in Kansas City under the auspices of The American Rhinologic Society with the cooperation of the University of Missouri-Kansas City, Kansas City General Hospital and Medical Center and Trinity Lutheran Hospital.

Guest professor will be Maurice H. Cottle, M.D., Professor of Otorhinolaryngology, Chicago Medical School. The course will include lectures, surgical and televised demonstrations, anatomical exercises and workshop-exhibit seminars.

Pat A. Barelli, M.D. of Kansas City, president-elect of the Society and chairman of the course, stated that 100 participating doctors and 50 teaching doctors from throughout the United States, Europe, South American and other foreign countries will be in attendance.

Applications should be addressed to Doctor Barelli at 4177 Broadway, Kansas City, Mo. 64111.

IVAN W. SLETTEN, M.D., DAVID OHLMS, M.D.,
MARJORIE L. BROWN, M.S. and HAROLD ALTMAN, M.D., *Columbia*

Mental Status Findings and Psychiatric Diagnosis

A Study

IN 1966, the Missouri Division of Mental Health initiated a program computerizing the psychiatric clinical record which included Mental Status findings and diagnosis. The overall program is called the Missouri Standard System of Psychiatry (SSOP) and is described elsewhere in detail.¹ The content of the Mental Status form was determined by the psychiatric staff of the Missouri Division of Mental Health and the research staff at the Missouri Institute of Psychiatry in St. Louis. Several textbooks and rating forms were used as sources of information concerning content. The form is brief and confined to one side of a sheet of paper. A branching method allows questions to be skipped if no findings are present (Fig. 1). The diagnosis is selected at the same time from the Diagnostic and Statistical Manual II (DSM-II)² printed on the reverse side of the Mental Status sheet. This dual-purpose form is completed for each new patient entering the hospital and yearly on long-stay patients. The Mental Status form is described elsewhere in more detail.³

The diagnostic nomenclature in current use is inadequate and needs further study and improvement. One problem is that the diagnosis does not contain adequate information concerning prognosis and probable response to treatment.^{4, 5} The SSOP provides actual clinical data for studying the diagnostic process. We feel that the analysis of the SSOP data can be helpful in shedding light on the diagnostic process and, perhaps, lead to improvements in the diagnostic process as well as improve use of the nomenclature as it now stands.

We have analyzed our data to determine (1) frequencies of Mental Status items in each diagnostic category, i.e., which items are checked most frequently for each diagnostic group, and (2) statistical correlations between Mental Status

items and diagnosis to discover which items significantly discriminate between groups.

These analyses will help us (1) to better understand current methods of making a psychiatric diagnosis, (2) to operationally and empirically define how a group of psychiatrists associate Mental Status items and diagnosis and (3) to discover the extent to which the selection of Mental Status items influences the choice of a diagnosis or vice versa.

METHODS

The diagnostic categories from DSM-II were condensed into 11 major groups for use in this study. DSM-II does not group organic brain syndromes into acute and chronic types. However, related DSM-II diagnoses can be identified in this manner and we have done so for this study.

The Missouri Standard System of Psychiatry (SSOP) is a statewide automated program for reporting uniform information on all patients admitted to the hospitals within the Missouri Division of Mental Health. This study of the relationships between Mental Status items and diagnosis was made by using the automated Mental Status records collected during a three-year period. Results suggest that there is a significant level of agreement among clinicians concerning which Mental Status items go with a particular diagnosis. The authors are from the University of Missouri School of Medicine, Department of Psychiatry, Missouri Institute of Psychiatry where Doctor Sletten is a Professor, Doctor Ohlms is a Resident in Psychiatry, Mrs. Brown is an Instructor and Doctor Altman is an Assistant Professor.

MENTAL STATUS EXAMINATION
(Missouri Division of Mental Diseases)
July 1968 Revision

Patients Name _____

Date of this report: ____/____/____ Name of Hospital S.L.S.H.

Sex of Patient: _____ Patient's Number 005/0

Date of Birth: _____

Ward: _____

INSTRUCTIONS:

1. If the answer to the first item in a Section (begins with a Roman numeral) is "True" circle "True" and proceed to the next Section. If not "True" then respond to those items in that Section for which the patient has findings.
2. Code: 1=mild, 2=moderate, 3=severe
3. Ignore numbers in the far portions of the 4 columns (They are for data processing).
4. When using carbon forms, fold out completely.

I Natural and Unremarkable A. Facial Expression: True sad 1 2 3 2 expressionless 1 2 3 3 hostile and angry 1 2 3 4 anxious, worried 1 2 3 5 Dress and Personal habits meticulous 1 2 3 6 clothing, hygiene poor 1 2 3 7 incontinence 1 2 3 8 bizarre dress 1 2 3 9 sideburns, odd hair styles, cowboy boots, etc. 1 2 3 10		B. Speech: excessive amount 1 2 3 12 amount reduced 1 2 3 13 monosyllabic 1 2 3 14 mute 1 2 3 15 slow verbalization 1 2 3 16 voice is soft 1 2 3 17 voice is loud 1 2 3 18 dysarthria 1 2 3 19 aphasia 1 2 3 20		VI Normal Concerns True phobias 1 2 3 2 obsessional ideas 1 2 3 3 depersonalization 1 2 3 4 derealization 1 2 3 5 homicidal ideas 1 2 3 6 thoughts of assault 1 2 3 7 thoughts of eloping 1 2 3 8 other antisocial ideas 1 2 3 9 guilt feelings 1 2 3 10 suicidal thoughts 1 2 3 11 hypochondriasis 1 2 3 12 heterosexual concern 1 2 3 13 homosexual concern 1 2 3 14		B. Manifests: clouding of consciousness 1 2 3 5 short attention span 1 2 3 6 inability to concentrate 1 2 3 7 poor recent memory 1 2 3 8 poor remote memory 1 2 3 9 amnesia 1 2 3 10 disassociation 1 2 3 11 cause probably is organic 1 2 3 12	
II Average Type and Quantity True increased in amount 1 2 3 2 decreased in amount 1 2 3 3 pacing and hand wringing 1 2 3 4 mannerisms 1 2 3 5 posturing 1 2 3 6 repetitive acts 1 2 3 7 angry outbursts 1 2 3 8 compulsive acts 1 2 3 9 ritualistic acts 1 2 3 10		IV Mood and Affect Normal True related about sad things 1 2 3 2 sad about pleasant things 1 2 3 3 shows silliness 1 2 3 4 flat (no fluctuations) affect 1 2 3 5 labile affect 1 2 3 6 mood elevated 1 2 3 7 mood depressed 1 2 3 8 labile mood 1 2 3 9		CONTENT of grandeur 1 2 3 15 of reference 1 2 3 16 of influence 1 2 3 17 of persecution 1 2 3 18 of worthlessness 1 2 3 19 of passivity 1 2 3 20 nihilistic ideas 1 2 3 21 somatic delusions 1 2 3 22 delusions have push and energy 1 2 3 23 delusions encapsulated 1 2 3 24		INTELLECT VIII Normal Ability True I. Q. above normal 1 2 3 2 I. Q. below normal 1 2 3 3 paucity of general knowledge 1 2 3 4	
III No Abnormalities True A Thought processes: blocking 1 2 3 2 echolalia 1 2 3 3 perseveration 1 2 3 4 clang associations 1 2 3 5 neologisms 1 2 3 6 flight of ideas 1 2 3 7 fragmentation 1 2 3 8 tangential thinking 1 2 3 9 circumstantiality 1 2 3 10 inability to understand proverbs 1 2 3 11		V No Abnormalities True anxiety 1 2 3 2 unrealistic hostility 1 2 3 3 impulsive acts 1 2 3 4 evasiveness 1 2 3 5 detached 1 2 3 6 tends to blame 1 2 3 7 sensitive to criticism 1 2 3 8 apathetic 1 2 3 9 lack of feelings 1 2 3 10 tendency to withdraw 1 2 3 11		THOUGHT B. Hallucinations: visual 1 2 3 25 auditory 1 2 3 26 tactile 1 2 3 27 gustatory 1 2 3 28 olfactory 1 2 3 29 insight and doubt about hallucinations 1 2 3 30 C. Illusions 1 2 3 31		IX No Abnormalities True A. Insight poor: unrealistic regarding degree of illness 1 2 3 2 feels needs no help 1 2 3 3 does not accept fact of hospitalization 1 2 3 4 B. Judgement impaired: doesn't know why hospitalized 1 2 3 5 unrealistic regarding tomorrow's activity 1 2 3 6 unrealistic regarding plans after release 1 2 3 7 unrealistic regarding employment plans 1 2 3 8 excessively willing to stay in hospital 1 2 3 9	
SPEECH AND THOUGHT		OTHER EMOTIONAL REACTIONS		INSIGHT AND JUDGEMENT			
SENSORIUM		VII No Impairment True A Impaired orientation: time 1 2 3 2 place 1 2 3 3 person 1 2 3 4		DO NOT WRITE IN THIS SPACE			

Fig. 1

Frequencies

In this study, 27,101 automated Mental Status records were utilized. They represented all such records collected over a three-year period since the inception of the SSOP program in the Missouri Division of Mental Health. About half of the records were completed at the time of admission and the other half were obtained on chronic patients at least one year after admission. The number of patients in each of the 11 diagnostic categories is presented in Table 1. The largest group is Chronic Brain Syndrome, containing 8,236 cases. The smallest is the Neurotic Group with 251 cases. The reports were analyzed to determine the frequency with which each item occurred in each of the 11 diagnostic categories.

Correlations

Correlations between items and diagnostic categories were computed on 5,220 patients who had Mental Status records. The cases were restricted to patients who were over 17 years of age, who were from one of the five state hospitals (the acute treatment centers were not included), whose Mental Status form had been completed within one month of admission and for whom a staffing or discharge diagnosis was available. The number of cases in each of ten categories is noted in Table 2. Acute Brain Syndrome was excluded from the correlation study because only one case met the above criteria. The largest and smallest diagnostic groups are again the Chronic Brain Syndrome with 1,141 cases and Neurosis with 142 cases.

RESULTS

The ten Mental Status items most frequently associated with each of the 11 diagnostic categories were selected as noted in Table 1 and are ranked from the most frequent (#1) to the least frequent. For example, Acute Brain Syndrome has "cause probably is organic" as its most frequent Mental Status item and "inability to understand proverbs" as the second most frequent item. More than ten items appear in some categories due to tied ranks at the cut-off point.

It is apparent from inspection of Table 1 that the first five items occur frequently with the organic brain syndromes and the major psychoses but not with the neuroses and personality disorders. For example, the first and second items, "unrealistic about degree of illness" and "inability to understand proverbs," are found in all categories except neurotic and neurotic depression. In some instances, the absence of items

suggests the presence of neuroses. This will be noted in the section of correlations.

Acute Brain Syndrome—As might be expected, the most frequent item checked is "cause probably is organic." Other items reflecting brain damage also occur frequently. "Visual hallucinations," "clouding of consciousness" and "short attention span" are among the ten most frequently occurring items only in this category.

Chronic Brain Syndrome—Many items are identical to those for Acute Brain Syndrome.

Mental Retardation—Many items are the same as for the organic brain syndromes. The items "inability to concentrate" and "I.Q. below normal" appear in the top ten items only in this category.

Psychotic Depression—"Mood depressed" and "sad facial expression" are the most frequent items.

Manic—The items "flight of ideas," "mood elevated" and "delusions of grandeur" are found only in this category, with respect to the ten items of highest frequency.

Paranoid Schizophrenia—The items "delusions of persecution" and "auditory hallucinations" are among the ten most frequent items only in this category.

Non-Paranoid Schizophrenia—Items are the same as those for Paranoid Schizophrenia with the exception of those two items listed above for Paranoid Schizophrenia and the items "orientation-time impaired," "paucity of general knowledge" and "tendency to withdraw."

Neurosis—Items concerning anxiety are high. Only in association with this diagnosis do the items "meticulous," "phobias" and "hypochondriasis" appear among the ten most frequent items.

Neurotic Depression—Most frequent items are "mood depressed" and "sad facial expression." Items not found among the top ten items of other categories are "voice is soft" and "motor behavior—decreased in amount."

Alcohol and Drug Addiction—The two most frequent items, "inability to understand proverbs" and "unrealistic regarding degree of illness," are also high on the list of the organic brain syndromes. This probably reflects the fact that alcoholics are often hospitalized with a diagnosis of Acute Brain Syndrome.

Personality Disorders and Sexual Deviation—"Unrealistic hostility" and "other antisocial ideas" are two items seen only in connection with this category in the ten most frequent items.

Correlations

Table 2 presents correlations between Mental

TABLE 1

The Ten Most Frequently Occurring Mental Status Items

For Each of 11 Major Diagnostic Categories

(Total Mental Status Records = 27,101)

Mental Status Items	Acute Brain Syn. (n=940)	Chr. Brain Syn. (n=8236)	Mental Retard. (n=4759)	Psychot. Depr. (n=616)	Mania (n=302)	Paranoid Schizo- phrenia (n=3232)	Schizo- phrenia (Exc. Paranoid) (n=7413)	Neurosis (Exc. Depr.) (n=251)	Neurotic Depr. (n=688)	Alcohol & Drug Addic. (n=335)	Personal & Disord. & Sex. Deviat. (n=329)
Unrealistic regarding degree of illness	6†	5	3	3	2	1	2		10	2	3
Inability to understand proverbs	2	1	1	4	6	2	1			1	2
Doesn't know why hospitalized		6	4	7	3	3	3				
Unrealistic regarding plans after release				11*	11*	8	6			11*	5
Unrealistic regarding tomorrow's activity			10		9	6	5			4	
Anxiety				6				1	6	7	6
Orientation - time impaired	3	2	5				8				
Feels needs no help				10	4	4				5	4
Flat (no fluctuations) affect						5	4	10			
Anxious, worried				5				2	4	9	
Orientation - place impaired	5	4	7								
Paucity of general knowledge		10	6				7				
Sad facial Expression				2				6	2		
Mood depressed				1				11	1		
Does not accept fact of hospitalization						7				6	1
Excessively willing to stay in hospital				12*						8	7
Speech - amount reduced				9				8	7		
Clothing, hygiene poor	4									3	
Motor - increased in amount	12*				5						
Speech - excessive amount					1					10	
Sensitive to criticism								4			10
Tendency to withdraw				8			10				
Guilt feelings								7	8		
Suicidal thoughts									3		12*
Poor recent memory	7	7									
Poor remote memory		9	9								
Cause probably is organic	1	3									
Unrealistic regarding employment plans							9				8
Orientation - person impaired	9	8									
Meticulous								9			
Flight of ideas					7						
Voice is soft									9		
Mood elevated					8						
Unrealistic hostility											9
Motor - decreased in amount									5		
Phobias								5			
Other antisocial ideas											11*
Hypochondriasis								3			
Delusions of grandeur					10						
Delusions of persecution						9					
Hallucinations - visual	8										
Hallucinations - auditory						10					
Clouding of consciousness	10										
Short attention span	11*										
Inability to concentrate			8								
I.Q. below normal			2								

† Numbers represent rank order of frequency, with 1 = most frequent,
2 = second most frequent, etc.

* Some diagnoses have more than ten mental status items because the cut-off
frequency occurred in more than one item and all items with that frequency
were included.

TABLE 2

The Ten Mental Status Variables Most Highly Correlated With Each of Ten Major Diagnostic Categories

(All correlations significant at .001 level)

(Total Mental Status Records = 5,220)

Mental Status Variable	Chr. Brain Syn. (n=1141)	Mental Retard. (n=293)	Psychot. Depr. (n=194)	Mania (n=68)	Paranoid Schizo- phrenia (n=518)	Schizo- phrenia (Exc. Paranoid) (n=923)	Neurosis (Exc. Depr.) (n=142)	Neurotic Depr. (n=266)	Alcohol & Drug Addic. (n=1320)	Person. Disor.& Sex.Dev. (n=355)
	rank "r"/order	rank "r"/order	rank "r"/order	rank "r"/order	rank "r"/order	rank "r"/order	rank "r"/order	rank "r"/order	rank "r"/order	rank "r"/order
General Appearance										
Sad			.21 2					.19 3		
Expressionless						.17 6				
Anxious, worried			.08 7				.13 3	.11 6		
Meticulous							.07 7			
Clothing, hygiene poor		.11 8								
Motor Behavior										
Motor - increased in amount				.17 3						
Motor - decreased in amount			.10 3							
Pacing and hand wringing				.06 8						
Speech and Thought										
Blocking						.20 4			-.18 8	
Flight of Ideas				.15 4						
Fragmentation						.17 7				
Tangential Thinking						.24 2			-.18 9	
Circumstantiality						.17 8				
Inability to understand proverbs		.15 4						-.11 4	-.18 10	-.12 3
Speech - excessive amount				.18 2						
Speech - amount reduced			.07 8							
Voice is soft			.07 9							
Voice is loud				.12 5						
Dysarthria		.11 9								
Mood and Affect										
Shows silliness		.18 3				.14 10				
Flat (no fluctuations) affect						.28 1			-.19 6	
Labile affect				.06 9						
Mood elevated				.26 1						
Mood depressed			.22 1					.23 1		
Other Emotional Reactions										
Anxiety							.14 2	.11 5		
Unrealistic hostility					.19 7					
Tends to blame					.17 9					
Tendency to withdraw						.22 3				
Thought Content										
Phobias							.10 4			
Obsessional ideas							.09 5			
Guilt feelings			.08 6							
Suicidal thoughts			.09 4					.21 2		
Hypochondriasis			.07 10				.15 1			
Delusions - of grandeur				.10 6	.25 3					
Delusions - of reference					.26 2					
Delusions - of influence					.22 5					
Delusions - of persecution					.37 1					
Delusions - of worthlessness			.09 5							
Delusions have push and energy					.19 6					
Hallucinations - auditory					.25 4	.19 5				
Sensorium							-.07 6	-.10 8	-.20 4	-.13 1
Disoriented - time	.44 3	.12 6						-.08 10	-.19 7	-.11 8
Disoriented - place	.46 2									
Disoriented - person	.35 6									
Clouding of consciousness	.17 10								-.20 3	-.11 6
Short attention span	.19 9	.13 5							-.19 5	-.12 5
Inability to concentrate	.20 8	.11 7					-.07 8			-.12 4
Poor recent memory	.43 4									-.11 7
Poor remote memory	.36 5									-.10 10
Cause probably is organic	.54 1									
Intellect										
I.Q. below normal		.44 1								
Paucity of general knowledge		.20 2								
Insight and Judgement										
Unrealistic regarding degree of illness							.07 9	-.10 9	-.25 2	-.10 9
Feels needs no help				.06 10	.18 8					
Does not accept fact of hospitalization				.07 7	.16 10					
Doesn't know why hospitalized	.22 7	.10 10					.06 10	-.11 7	-.29 1	-.13 2

Status items and diagnostic categories. Only the ten highest correlations for each diagnostic category are shown. The correlations are ranked from the highest (#1) to the lowest (#10). All correlations noted are significant at the .001 level or better. Correlations are all positive for Organic Brain Syndrome, Mental Retardation and

the major psychoses. Six are positive for Neurotic and five are positive for Neurotic Depression; the remainder are negative. For Alcohol and Drug Addictions and for Personality Disorders and Sexual Deviation, all ten correlations are negative. Apparently, for these latter categories absence of symptoms in the Mental

Status is of considerable importance.

Chronic Brain Syndrome—The best correlation is with "cause probably is organic." All items highly correlated with this diagnostic category reflect inadequate functioning of the sensorium and inadequate judgement.

Mental Retardation—The best correlation is with "I.Q. below normal" and there are three items reflecting inadequate sensorium functioning.

The remaining diagnostic categories and the Mental Status items which are most highly correlated with them (in decreasing order) are as follows:

Psychotic Depression—"mood depressed," "sad facial expression" and "motor behavior—decreased amount." *Mania*—"mood elevated," "speech—excessive amount" and "motor behavior—increased amount." *Paranoid Schizophrenia*—"delusions of persecution," "delusions of reference" and "delusions of grandeur." *Non-Paranoid Schizophrenia*—"flat affect," "tangential thinking" and "tendency to withdraw." *Neuroses*—"hypochondriasis," "anxiety" and "anxious and worried facial expression." *Neurotic Depression*—"mood depressed," "suicidal thoughts" and "sad facial expression."

Alcoholism and Drug Addiction and Personality Disorder and Sexual Deviation—Negative correlations are the strongest and concern sensorium and gross judgement, areas in which these patients usually appear to be normal.

DISCUSSION

It is reassuring to see that the frequency with which Mental Status items are recorded for the major diagnostic categories are clinically understandable and meaningful. One expects to find "clouding of consciousness" and "short attention span" frequently associated with Acute Brain Syndrome. The findings for the other diagnostic categories were equally reasonable, clinically. The patterns of relationships between Mental Status items and diagnosis found in this study generally agree with descriptions of diagnostic categories in standard textbooks.⁶⁻⁹ It may be that much of the agreement seen indicates that clinicians make a diagnosis and subsequently check Mental Status items to fit the diagnosis they have made. Since often they have read the same textbooks and had similar training, they thus make similar diagnoses. This possibility is supported by Overall and Hollister, who have noted that clinicians are able to conceptually differentiate patient groups quite well.¹⁰

The differences between Paranoid Schizophrenia

and Non-Paranoid Schizophrenia noted here suggest that Paranoid Schizophrenic patients are less ill and less deteriorated. This tends to support the findings of others that Paranoid Schizophrenic patients have a better prognosis than Non-Paranoid Schizophrenic patients.⁶ It is of interest that "suicidal thoughts" appear as one of the ten most frequent findings of Personality Disorder patients and suggests that further study of this association is needed.

The preponderance of negative correlations for the Neurotic, Personality Disorder and Addiction categories indicates that the Mental Status items on this form do not adequately address themselves to these categories. The textbooks and rating forms which we consulted when we developed our form were primarily concerned with manifestations of the major psychoses. Also, the clinicians in the state system who contributed items for inclusion in our form were aware that their populations consisted mainly of psychotic patients. In further revisions of the form, we will attempt to correct these deficiencies.

We have developed statistical formulae (multiple discriminant functions) which differentiate all diagnostic categories noted here (except Mania), including Neuroses and Personality Disorders. Using a Mental Status form completed for a particular patient plus these formulae, we are able to arrive at the same diagnosis as the clinician about 50% of the time. This compares favorably with the diagnostic agreement between clinicians. These findings are reported elsewhere.¹¹ Our diagnostic accuracy should improve if we provide items on the Mental Status which will allow more definitive identification of all groups.

Nathan *et al* have conducted a study similar to ours.¹²⁻¹⁷ Other than theirs, we have not found a report of any study comparable to ours. They developed a diagnostic instrument for use in Boston City Hospital and determined what symptoms and symptom clusters were associated with diagnostic groups. Many of their findings agree with ours, as follows:

- Psychoses can be differentiated from non-psychotic categories on the basis of hallucinations and delusions.
- Anxiety does not clearly differentiate Neuroses from other categories.
- Personality disorders cannot be differentiated from other major categories on the basis of traditional Mental Status items. The most distinguishing feature is the absence of positive items.

(Continued on page 255)

Postoperative Chylous Ascites

Case Reports

IN 1959, Burdette¹ presented an excellent review of the medical literature concerning chylous extravasations and noted that cases of chylous ascites following surgery of the abdomen were rare. In 1967, Walker² reported a case of chylous ascites following pancreaticoduodenectomy and suggested that this complication might not be so rare in the future as more aggressive surgical procedures are undertaken in the upper abdomen. Chylous ascites from other causes is not uncommon.³⁻⁵

A review of the records of Barnes and St. Luke's hospitals in St. Louis revealed only two cases of chylous ascites following surgery. Our experience is presented to suggest a therapeutic regime for this problem.

CASE REPORTS

Case # 1. This seven-year-old white boy was admitted to Barnes Hospital because of splenomegaly extending below the iliac crest. This condition had been developing slowly since shortly after birth. Esophageal varices were seen on upper gastrointestinal roentgenograms and the patient's blood count demonstrated a marked pancytopenia. Splenectomy was performed and a splenorenal venous anastomosis was made. The pathological report was "fibrocongestive splenomegaly." The postoperative course was uneventful. He was readmitted at the age of 13 years in December, 1962 because of upper gastrointestinal hemorrhage demonstrated to be due to esophageal varices. One week after admission, an exploration was performed. The splenorenal anastomosis had been occluded by clot so the superior-mesenteric vein was anastomosed to the inferior vena cava. The patient was discharged on the 13th postoperative day.

He was readmitted 24 days later with massive abdominal distention. Two days after admission, the patient's abdomen was opened and 2,000 ml of chylous material was removed. An attempt was made to ligate the site of the leak which was found in the mesentery of the small bowel. Because of the fragile nature of the structures, this was not successful; therefore, a sump drain was left at the mesenteric leak site.

Table 1 indicates the amounts of fluid removed. As noted, the sump was removed after eight days

In suggesting a simple and effective therapeutic regime for the problem of postoperative chylous ascites, the authors cite two case reports from their experience. They recommend that surgery to correct this condition is not indicated until lesser procedures have been tried. The authors are from the Departments of Surgery, St. Luke's and Barnes Hospitals, and the Department of Surgery, Washington University School of Medicine.

of drainage only to have the abdomen redistend. To reduce lymph formation by restricting physical activity, the patient was placed in a body spica for complete immobilization. After five days of this regime, the cast was removed with no further accumulation of the fluid. Six months later, an esophogastrectomy was necessary because of the recurrence of upper gastrointestinal hemorrhage. Following this last procedure, the patient has remained in fair health.

Case # 2. A thin, 68-year-old white man was admitted to St. Luke's Hospital after his family physician discovered an 8 cm pulsatile abdominal mass. His presenting complaint had been a mild backache which was present for one week. This past history was noncontributory and the remainder

TABLE 1

Day Postop

0	Day of surgery—2,000 ml
1	Sump drainage— 750 ml
2	Sump drainage— 670 ml
3	Sump drainage— 888 ml
4	Sump drainage—1,280 ml
5	Sump drainage—1,395 ml
6	Sump drainage— 165 ml
7	Sump drainage— 237 ml
8	Sump removed— 200 ml
9, 10, 11, 12	Abdominal swelling recurred
13, 14, 15, 16	Patient put in body spica
17, 18	Abdominal swelling regressed
19	No further ascites—spica removed

of the physical examination was essentially negative except for a few fine rales in both lung bases. It was elected to digitalize him overnight and he was scheduled for resection of the aneurysm the next day. However, at six o'clock the following morning, he became hypotensive and complained of an excruciating backache. He was taken at once to the operating room.

At surgery, it was found that the aneurysm began just distal to the renal arteries and involved both iliac arteries with the leak just above the origin of the left common iliac artery. The aneurysm was resected and replaced by a knitted Dacron prosthesis. The postoperative course was uneventful until the tenth postoperative day when "watery, red-tinged fluid" leaked from the midportion of the incision. The patient had been closed with stainless steel sutures and since no fascial defect or loops of bowel could be palpated through his thin abdominal wall, it was elected to observe him, being encouraged by his otherwise excellent clinical condition, including normal alimentation. The drainage became progressively less and stopped on the 16th postoperative day. Coincidental with the cessation of the leak, his abdomen began to distend and, by his 22nd postoperative day, paracentesis was required because of marked dyspnea. Table 2 indicates the dates and amounts of fluid obtained by paracentesis. The fluid was now milky in color and contained 2 gm of protein, 1,550 white blood cells and 850 red blood cells per milliliter. When it became apparent that fluid was continuing to form and also that his body was wasting, absolute restriction of all physical activity was tried as suggested by Case # 1. This seemed to slow the accumulation, but still he was requiring peritoneal taps because of dyspnea. His blood proteins fell to 3 gm/100 cc and he developed dependent edema. At this point, it was decided to collect and reinfuse the abdominal fluid, using the reinfusion set designed for treating cirrhotic patients.

As is seen on Table 2, the amounts of fluid decreased fairly rapidly. After cessation of this therapy, he was discharged. In the subsequent year, no fluid reaccumulated and his body fluid chemicals returned to normal levels.

DISCUSSION

Postoperative chylous ascites is rare as reported in the literature and yet the fragile structure and vulnerable position of the cisterna chyli would seem to lend itself to wounding. The explanation for the rarity of this complication must be in the low pressure of the lymphatic system that allows wounds of the cista or its tributaries to clot easily. As increasingly complicated procedures are undertaken in the upper abdomen, this condition may be more common. Repeated paracenteses may be used to relieve the respira-

TABLE 2

Day Postop	
0	Day of surgery—Replace leaking aortic aneurysm
10	Pink drainage from wound—"watermelon juice"
16	Abdominal leakage stopped
22	Abdomen distended—paracentesis— 800 ml
23	Abdomen distended—Paracentesis—2,750 ml
25	Abdomen distended—Paracentesis—3,450 ml
26, 27, 28, 29, 30, 31	Profuse drainage from paracentesis sites
32	Period of absolute immobilization of patient begun
35	Paracentesis—5,140 ml
39	Paracentesis—4,200 ml
44	Reinfusion started—collected and reinfused—daily amounts 1700 ml
45	Paracentesis—2,650 ml
46	Paracentesis—2,050 ml
47	Paracentesis— 720 ml
48	Paracentesis— 450 ml
49	Paracentesis— 350 ml
50	Paracentesis— 575 ml
51	Reinfusion set removed—Paracentesis—150 m

tory distress produced by distention of the abdomen and sometimes this may suffice.⁶ Repeated loss of chyle from the body economy is not innocuous. If a few paracenteses or immobilization or both do not arrest the condition, further steps must be taken. The surgical correction of the chyle leak is not without hazard nor is it completely successful, even as reported by the advocates of this approach.⁷⁻¹¹ The lesser procedure of removing chyle from the abdominal cavity and infusing it into the venous system would seem the procedure of choice. This has been tried in the past^{12, 13} and not always with fortuitous results,^{9, 14-17} since this may produce multiple small emboli. In our case, the use of the reinfusion set designed for treating ascites, resulting from cirrhosis, was a simple and effective method. Its earlier use would have prevented the deterioration of this patient and reduced his hospital stay. Infection in these patients should not be a problem because of the antibacterial nature of chyle.

SUMMARY

Reports of two cases of postoperative chylous ascites are presented. The first patient was treated by immobilization after many paracenteses. The second patient failed to respond to immobilization and was cured by collecting and reinfusing the chyle through a reinfusion set (Abbott). Surgery to correct this condition does not seem indicated until these lesser procedures

have been tried. This technique of reinfusion may be applied in chylous ascites resulting from other causes. The present device for reinfusion contains a filter which may prevent the causes of morbidity and mortality as noted in prior cases.

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Mental Status Findings

(Continued from page 252)

- Increased psychomotor activity and flight of ideas are related to Mania.
- Decreased psychomotor activity is seen in the Depression categories.
- Persecutory delusions and delusions of reference are related to a diagnosis of Paranoid Schizophrenia.
- Delusions of worthlessness are related to Psychotic Depression.
- Depressed affect is a good predictor of Psychotic as well as Neurotic depression.
- Flat affect is a good predictor of Schizophrenia.

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Bilateral Pheochromocytoma With Megacolon

Case Report

BILATERAL ADRENAL PHEOCHROMOCYTOMA with megacolon has been reported previously only once in the medical literature.¹ This is the second case report of a successful surgical ablation of both adrenal tumors with a marked clinical improvement of the megacolon after surgery.

CASE REPORT

This 31-year-old white man entered the hospital on June 15, 1967 with the presenting complaints of severe headache, hypertension and "fainting spells." Since 1957, he had had intermittent episodes of severe headaches. Chronic constipation had been a complaint since early childhood and bowel movements had to be initiated by laxatives, cathartics and enemata. Since 1961, he had to give himself an enema every ten to 14 days. Headaches and extreme sweating were more frequent with the degree of constipation and abdominal distention. He also stated that lying on his left side precipitated the headaches.

At the age of 12 years, he had an operation on his left hip. During that hospital stay, he was given an enema. This was followed by vomiting and loss of consciousness. Conservative treatment was given. A secondary diagnosis of congenital megacolon was charted. He also had numerous operations for bilateral club feet during childhood and three operations for a fractured left hip at the age of 17 years.

On July 15, 1964, he was admitted to a hospital for an acute abdominal condition which necessitated an exploratory laparotomy. During surgery, a huge "megacolon" was found with large bolus of impacted feces in the transverse, descending and the sigmoid colon and rectum. A diagnosis of intestinal obstruction due to fecal impaction was

made. No biopsies were obtained. The impacted feces were expressed through the intact bowel and the apparent intestinal obstruction was relieved through this maneuver. On the sixth postoperative day, the patient developed a seizure consisting of jerky movements and cold, clammy perspiration, and he complained of severe abdominal pains and severe headaches at the time of seizure. Blood pressure at that time was 200/120. EKG revealed sinus tachycardia. A diagnosis of possible "Demerol withdrawal reaction" was made. Again on the seventh postoperative day, the patient had another "mild seizure." Catecholamines were ordered at that time but, unfortunately, the patient was discharged before results of the test were obtained: They were epinephrine, 71.9 mcgs/24 hrs (normal—up to 40 mcgs); norepinephrine, 89.1 mcgs/24 hrs (normal—up to 100 mcgs); total Catecholamines, 161.0 mcgs/24 hrs (normal—up to 120 mcgs).

The patient denied any member of his family having similar episodes of hypertension.

Pertinent physical examination findings on admission included a blood pressure of 260/160. The abdomen was protuberant and soft. There was a healed midline incision extending from the xyphoid process to approximately 9 cm below the umbilicus. The left lower extremity is markedly shorter than the right resulting from an old operation on the left hip. An admitting diagnostic impression of pheochromocytoma was made.

On June 17, 1967, 19 days before operation, a phentolamine (Regitine) test was done. The blood pressure fell from 260/160 to 120/80 with 1 mgm of phentolamine given intravenously. The blood pressure then rose to former levels in about one minute. Pertinent laboratory work on admission showed sodium, 141 mEq per liter; potassium, 4.9 mEq per liter; chloride, 102 mEq per liter. Twelve-hour urine specimen was 1,235 ml. Concentration test showed the specific gravity to reach 1.020; BUN was 19 mg%, Hb 19 grams, HT 47%. A repeat hemoglobin on June 29, 1967 revealed Hb 12.7, HT 41. The Catecholamines were 153.8 (normal: 32-103 mcgs/24 hr). A repeat Catecholamine test on June 21 revealed Catecholamine: 2423.7 (normal: 32-103 mcgs/24 hr). A urine test for porphobilinogen on June 17 was negative and for urobilinogen was positive. The patient received phentolamine orally and was symptomatically much improved. On June 20, 16 days before operation, the phentolamine was discontinued on a trial basis. Palpation of the left upper quadrant of the abdo-

This case report of a patient with a rare combination of bilateral pheochromocytoma and megacolon is the second in medical literature. Surgery was performed in 1967. The patient is now completely asymptomatic, free of any abdominal distention and has normal bowel habits. Doctor Suba is in the private practice of surgery.

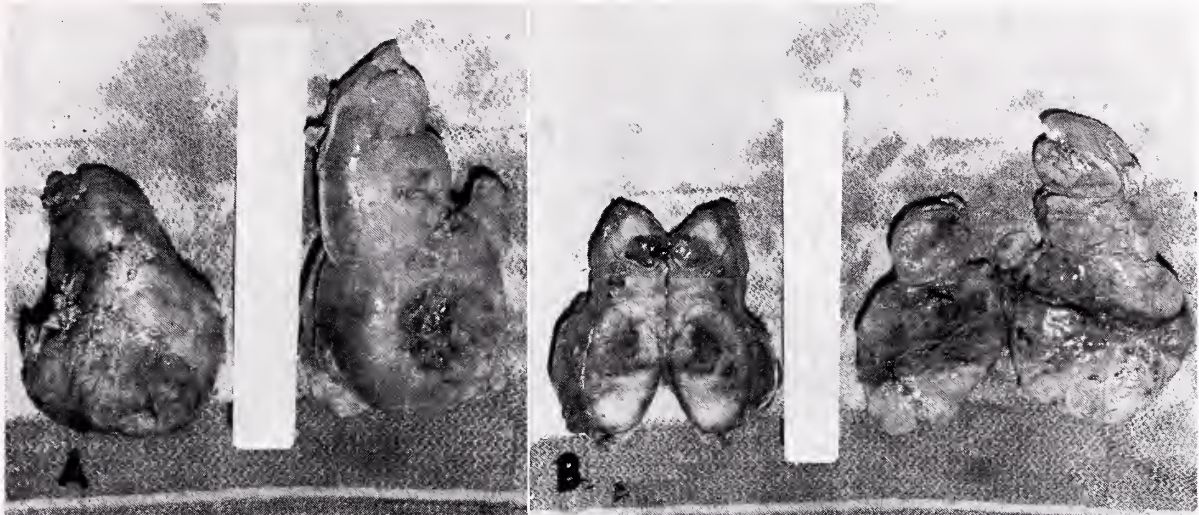


Fig. 1 (A) An encapsulated tumor was 14.5 cm x 7 cm x 6 cm and weighed 290 grams, with the left adrenal gland 5 cm x 3 cm x 1 cm compressed into the upper pole. The thin transparent capsule actually is the capsule of the adrenal gland, greatly expanded by the tumor. The tumor is moderately firm, consists of confluent nodules which are tan, yellow and red, with areas of cystic degeneration up to 3 cm in diameter. The right adrenal tumor was 10 cm x 7.5 cm x 4.5 cm, weighed 120 grams and was grossly similar to first specimen except for smaller size. (B) Cut sections of left and right adrenal and tumors.

men caused an elevation of the blood pressure to 240/160. On June 27, nine days prior to operation, an attempted retrograde pyelography and cystography was cancelled because the patient went into a severe hypertensive episode and fainted when the thighs were abducted, both legs placed up in stirrups in the lithotomy position and abdominal pressure applied. Phentolamine administered intravenously immediately controlled this attack. He received 10 mgm of phenoxybanamine (Dibenzyl-line) every 12 hours on June 27. Blood volume studies showed an increase in both blood and cell volume with normal plasma volume.

On July 6, 1967, an exploratory laparotomy was performed. A left subcostal incision was used. The

left rectus was transected. Abdominal exploration and pressure over the left adrenal gland elicited the expected hypertension. The markedly distended left colon was reflected towards the midline by releasing the splenocolic ligament and the left colon peritoneal attachment. The Gerotas' capsule was incised and the left kidney exposed. A large left adrenal tumor was removed with sharp and blunt dissection (Figs. 1-3). The left suprarenal vein was ligated and cut. The anticipated hypertension following the ligation of the suprarenal vein was not noted. The tumor with the left adrenal gland was removed in its entirety. The left colon was reposed to its original position. A large Sump drain was left in place retroperitoneally and brought out through a stab wound in the left flank.

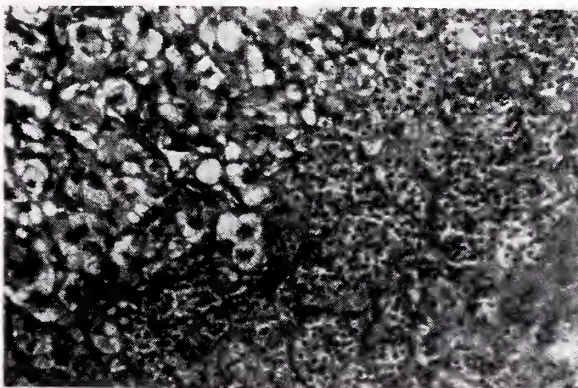


Fig. 2 Pheochromocytoma within the adrenal gland showing a swollen twisted cord pattern adjacent to cortical cells. There is pooling of cells with ruptured finely granular cytoplasm and pyknotic nuclei. (Formalin fixation. H. & E. x 100).

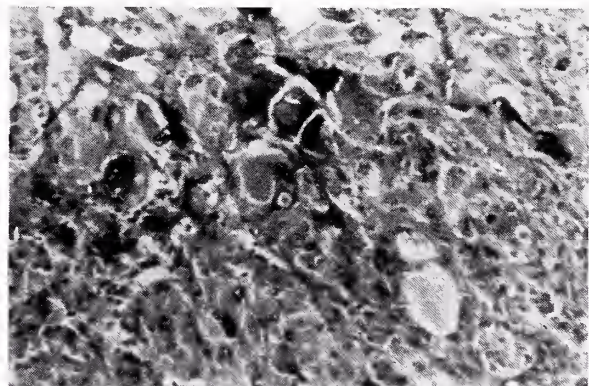


Fig. 3 Pheochromocytoma within the adrenal gland showing a swollen cord pattern and necrotic zone. There are bulging cells with granular cytoplasm and crescentic nuclei. (Formal fixation. H. E. x 100).

The tail of the pancreas was visualized and was dissected free off of the tumor. The splenic vein was likewise identified and preserved. A search for accessory adrenal glands was done all along the periaortic area, peripancreatic area, mesentery and the bifurcation of the aorta for the organ of Zuckerkandl. There was no evidence of any enlarged nodes or accessory adrenal glands. Prior to abdominal closure, reexploration of the right adrenal or kidney area was done. A marked hypertension resulted with slight pressure over the right kidney area. The latter was found to be enlarged and a tumor palpated in the region of the right adrenal gland. The patient was then redraped and the right kidney area was approached through a right subcostal incision. The right adrenal tumor was exposed. The right suprarenal vein entered directly into the vena cava and this short segment of vein was carefully dissected and doubly tied and sutured. The tumor was removed and a precipitous drop in blood pressure was noted. A large Penrose drain was left in place over the right lumbar gutter and brought out through another stab wound in the right flank. The patient received three units of whole blood during surgery. He was given 100 mgm of hydrocortisone sodium (Solu-Cortef) intramuscularly every six hours immediately after surgery and then every eight hours the next day. He took a full diet on July 9, the third postoperative day.

Blood volume studies on July 13 and catecholamine test done on July 11 were both normal. He was discharged on July 16, 1967, the tenth postoperative day on a regimen of cortisone acetate in oral doses.

The patient has since been completely asymptomatic with normal daily bowel movements. He has stayed on a daily maintenance dose of cortisone acetate (two tablets). He has refused a rectal biopsy on numerous occasions. He was last seen on

Sept. 16, 1969, about two years after operation, with a blood pressure of 108/60 (both arms), with no complaints and having daily normal bowel movements.

COMMENTS

The causal relationship between pheochromocytoma and megacolon (acquired type) has been the subject of many studies and experiments through the years. The abnormal migration of neural crest cells in the genesis of megacolon has been postulated.^{2, 3} Another theory cites the sympathetic-parasympathetic imbalance of the bowel resulting in excessive sympathetic activity thereby giving rise to atony of the colonic wall.^{4, 5} This particular theory is supported by experiments in rabbits when prolonged noradrenaline administration has caused massive dilatation of the colon.⁶

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As an aid in training physicians, nurses and ambulance attendants in the uses of cardiopulmonary resuscitation, the American Heart Association has produced a set of slides entitled, "History of Resuscitation." Approved by the AHA's Committee on Cardiopulmonary Resuscitation, the slides depict in chronological order man's concern for preserving life through various methods of resuscitation from early flagellation to modern methods of rescue breathing.

The set consists of 21 black and white slides and four slides in color. It was adapted by the AHA from an exhibit at the Museum of Science and Industry in Chicago. The slides may be obtained through the Missouri Heart Association, P.O. Box Q, Columbia, Mo. 65201.

THOMAS C. SUTTERFIELD, M.D., and
HAL C. BINGHAM, M.D., *Columbia*

Reconstruction of the Eyebrow and Eyelid Following Traumatic Deformity

Case Report

RECONSTRUCTION of the eyebrow and eyelid has been accomplished in a number of ways. In 1849, Jobert used a pedicle flap along the temporal hairline to reconstruct an eyebrow.¹ In 1898, Monks reported a technique of reconstruction of the lower lid by the island pedicle technique based on the anterior branch of the superficial temporal artery.² In 1920, Morax used pedicle flaps formed by splitting the normal brow and transferring one half to the deficient side.³ In 1962, Longacre introduced the concept of a combined composite scalp and postauricular skin graft for a single stage reconstruction of the eyelid and eyebrow.⁴ Converse, in 1962, employed a marsupialized eyebrow graft.⁵ The epidermis is removed from the scalp graft and the graft is buried under the skin of the supraorbital ridge. At a later date, the graft is marsupialized and brought to the surface.

CASE REPORT

On November 12, 1969, a 21-year-old white woman was admitted to the University of Missouri Medical Center with a complaint of an open wound in the right periorbital area (Fig. 1). Eleven days prior to this, she was in a car accident and sustained a laceration of her right upper eyebrow and eyelid. On admission some degree of contracture deformity of the upper lid was already present and she was unable to completely close the right eye.

On Nov. 13, 1969, she was taken to the operating room where debridement of the wound with application of a split-thickness skin graft and tarsorrhaphy was done. Four fifths of the eyebrow and approximately one third of the eyelid were replaced.

There was good "take" of the original graft, but the tarsorrhaphy was lost and further contracture of the upper lid occurred. On November 28, an island pedicle flap from the parieto-temporal area and based on the superficial temporal artery was



Fig. 1 Extent of necrosis and soft tissue loss of the eyebrow and upper lid area.

This is a case report of a 21-year-old woman whose right eyebrow and upper eyelid were seriously lacerated in an automobile accident. The authors describe the technique employed in reconstruction. They also review other techniques and discuss their advantages and disadvantages. Doctor Bingham is Associate Professor of Surgery (Plastic) and Chief, Section of Plastic Surgery, University of Missouri Medical Center. Doctor Sutterfield, who was a Resident in Plastic Surgery at the Medical Center at the time this paper was written, is now in the private practice of plastic and reconstructive surgery in Hawthorne, Calif.

rotated into the eyebrow area through a subcutaneous tunnel (Figs. 2-5).

Since mild contracture of the upper lid remained, a full-thickness graft from the contralateral upper

lip was applied to the scarred right upper lid on February 26.

Adequate release of the upper lid contracture had now been achieved. The luxuriant bushy growth of the eyebrow had been excessive and, in the future, it will be necessary to reduce this for a more acceptable cosmetic result.

DISCUSSION

Reconstruction of deformities of the eyebrow and eyelid must take into account the degree of deformity and the needs of the patient. A scarred fibrotic brow may provide a poor recipient site for a hair-bearing composite graft. Proponents of this technique state that the large, full-thickness graft contains numerous vascular connections (the rete arteriosum cutaneum) which permit good connections with the recipient bed. The cosmetic result can be quite satisfactory and the advantage is a one stage procedure.

The pedicle flap technique should produce a uniformly reliable result because of its good vascularity. It is especially appropriate if a bushy



Fig. 2 (A) Elevation of temporal flap and deepithelialization of the base will be tunneled subcutaneously. (B) Flap being tunneled subcutaneously into location in the eyebrow area. (C) Flap being sutured into place and the donor site closed.



Fig. 3 The flap elevated and epithelium being removed from the portion to be located subcutaneously.

eyebrow is needed. The technique of splitting the contralateral normal eyebrow and rotating one half over, based on the glabellar vessels, probably should be reserved for cases of loss of the medial part of the eyebrow only.

SUMMARY

In summary, reconstruction of the eyebrow and eyelid is not a new procedure. Several methods have been available for more than 100 years. Various techniques have been described in this report. The technique that is ultimately selected should take into account the condition of the recipient site, the amount of eyebrow hair actually required and the associated condition of the adjacent upper eyebrow. One of these techniques has been illustrated in this case report.

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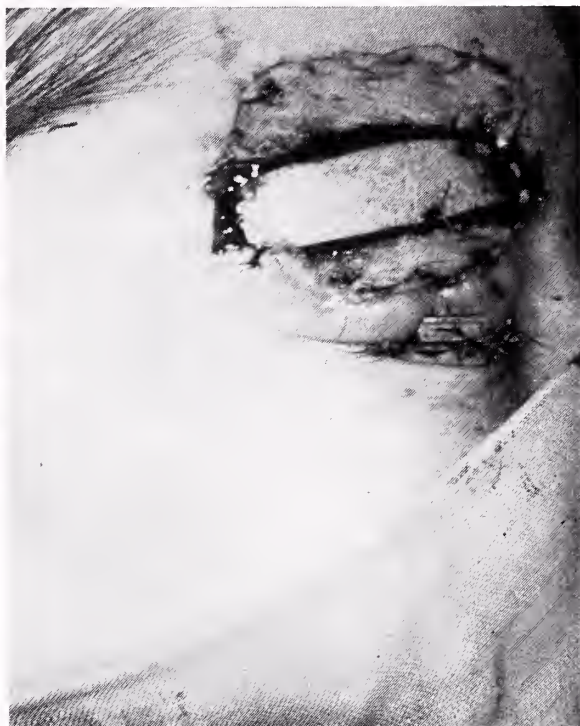


Fig. 4 The flap in place in the eyebrow area.



Fig. 5 Donor tissue grew a luxuriant eyebrow that required trimming for symmetry with the opposite eyebrow.

The AMA Conference on Long-Term Care Management of the Patient in the Long-Term Care Facility will be held at the Drake Hotel in Chicago from 9 AM to 4:30 PM on April 25, 1971, immediately following the Annual Meeting of the American Geriatrics Society. Advance registration for the meeting should be addressed to the American Medical Association, 535 N. Dearborn St., Chicago, Ill. 60610. Please make your own hotel reservations.

Special X-Ray Exhibit

SIDNEY RUBIN, M.D., RODGER LAMBIE, M.D. and
EDWIN HERMAN, M.D., *Kansas City*

Radiologic Problem Case

A 62-YEAR-OLD WHITE MAN was admitted to the hospital on June 8, 1970 for evaluation of a pulmonary lesion that was detected on a chest roentgenogram. The patient's chief complaint was a cough which persisted for four weeks in spite of various cold remedies.

Past History: The patient was a chronic smoker, smoking about 20 to 40 cigarettes per day for more than 40 years. Eighteen years ago, the patient had a coronary occlusion with mild heart failure. Ten years ago, the patient was hospitalized for Guillain-Barré Syndrome.

Family History: The patient's mother had diabetes.

Physical Examination: Noncontributory.

Laboratory Data: Skin test for TBC and histoplasmosis were negative. Sputum for acid-fast was negative. Culture for mycobacterium was negative.

A bronchography was nonrevealing, and bronchial washings failed to demonstrate any fungi, mycobacterium or neoplastic cells.

An X-ray film of the chest had been taken on Jan. 29, 1970 as part of a routine examination. A small density was observed to overlie the third rib anteriorly. This density had been present on previous films taken for yearly check-ups. The density was considered to represent a small calcified or fibrocalcereous shadow (Fig. 1).

On May 23, 1970, a routine chest film re-

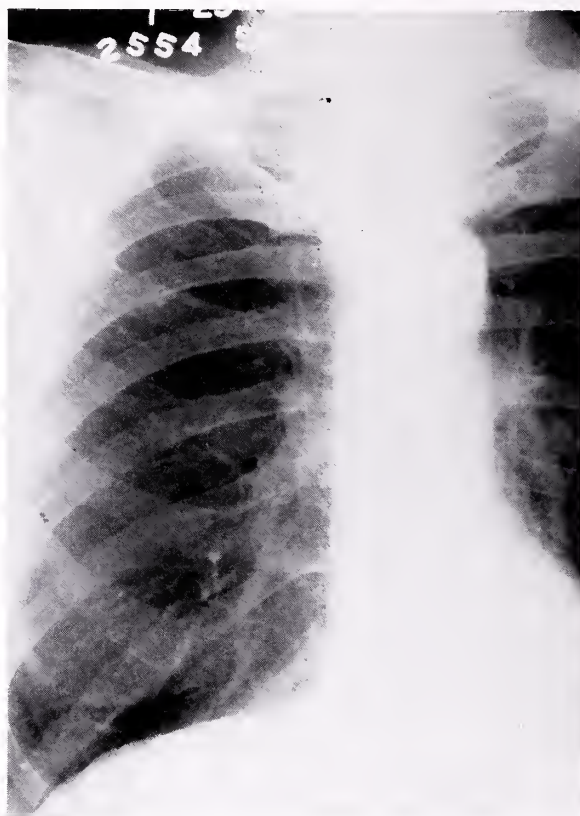


Fig. 1 Film taken on Jan. 29, 1970 demonstrates small fibrocalcereous density overlying third rib anteriorly.

This is the fourth in a series of articles presenting unusual radiologic problem cases which the authors believe will be both interesting and educational for the practicing physician. Drs. Rubin, Lambie and Herman are from the Department of Radiology, Menorah Medical Center. They were assisted by Hal Marshall, M.D., pathologist.

vealed a crescent-shaped density involving the upper lobe (Fig. 2). Due to the fluid-like level of this shadow, tomograms as well as lordotic views were made.

The lordotic view was as diagnostic as the tomograms in that a small cavity approximately 1.5 cm in diameter was thrown into relief and the entire wall of the lesion was delineated. The cavity was enclosed by a thin, smooth wall containing a small amount of fluid which projected as a horizontal level (Fig. 3).

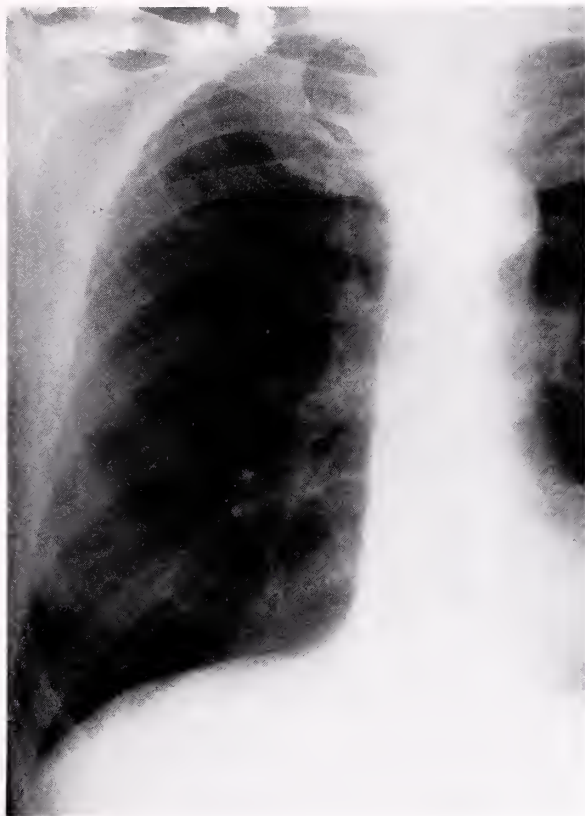


Fig. 2 Crescent-shaped shadow is evident at third rib level. Upper portion of cavity is only suggested and not definitive.

ROENTGEN DIAGNOSIS

Differential Diagnosis: The differential diagnosis included the following:

1. Tuberculosis
 - a. typical
 - b. atypical

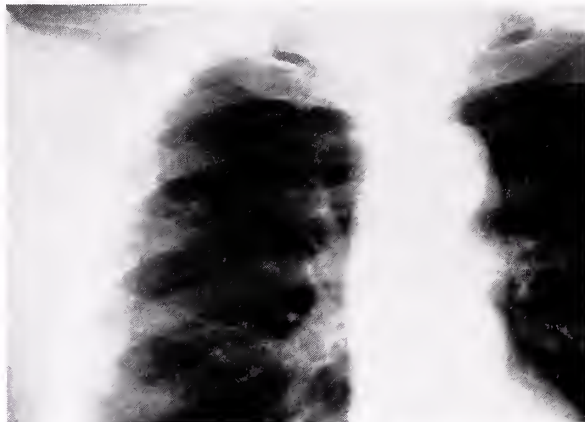


Fig. 3 Lordotic view defines total nature of lesion. Thin wall, bleb-like cavity contains a small amount of fluid.

2. Other fungal disease
3. Carcinoma

Discussion: Cavitation of carcinoma has been known to occur in approximately 12% of all lung neoplasm. The carcinomatous wall is primarily thick and nodular, suggesting the nature of the disease. However, thin wall, bleb-appearing cavities occur in carcinoma.¹ *It has been stated that cavitated lesions are statistically more apt to be neoplastic in patients over 40 years of age.*²

Pathological Diagnosis: The right upper lobe of lung shows alveolar cell carcinoma arising in a lung scar with a smooth thin-walled cavity. No extension to hilum or pleura.

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The new edition of the booklet, *Group Practice: Guidelines to Joining or Forming a Medical Group*, is available without charge from the Department of Health Care Organization, American Medical Association, 535 North Dearborn, Chicago, Ill. 60610. The booklet was prepared under the direction of the Joint Liaison Committee of the American Association of Medical Clinics, AMA and Medical Group Management Association.

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President's Message

IF YOU'RE NOT PART OF THE SOLUTION OF MSMA'S CHALLENGES— YOU'RE PART OF THE PROBLEM!

I have just received my final administration of sublingual Isosorbide Dinitrate (antianginal prophylaxis) preparatory to writing this, my final public communication with you, the membership-at-large.

One of the paradoxes of our time is that our preoccupation with a multitude of problems often prevents us from focusing on areas in which we might progress and, thereby, become stronger.

In many respects, 1970 has been both a frustrating and successful year. Yet, I must emphasize that few obstacles are insurmountable to men of determination and confidence.

Turning toward tomorrow, today, requires dynamic change. Those organizations which have adapted to change are surviving! Those which are capable of managing change to the maximum benefit are not only surviving but are growing in strength.

The philosophy of peer review has been accepted by the Social Security Administration and it is almost certain that the 92nd Congress will establish PSRO. I believe the physicians of Missouri must accept this as inevitable.



Joseph L. Fisher, M.D.

The Missouri State Medical Association, in conjunction with the Missouri Association of Osteopathic Physicians and Surgeons, has jointly established the "Health Care Foundation of Missouri" for statewide peer review in an effort to provide uniformity which will have the wholehearted support and cooperation of the entire profession of this state. This, then, should act as a buttress against any undesirable or distasteful dictates that might come down from Washington. A single, strong, steadfast voice speaking for the entire profession of this state will be the only mechanism which will carry significant influence in controversial fields or in matters which must eventually be adjudicated.

Several dark clouds have arisen on the horizon, some of which would seek to temporarily interrupt the functions of the Health Care Foundation. To attempt this kind of professional assessment on the county level would dilute the impact of physicians assessing physicians' performance. The most cogent reason for peer review, statewide, is that we need consistency—consistency in guidelines, consistency in standards of care, consistency in fees and consistency in zealously guarding the accepted patterns for the democratic provision of medical care.

The bylaws of the Health Care Foundation have been carefully designed to give recognition and voice to both professional groups so that all levels of our membership can be adequately represented and protected.

The Health Care Foundation provides a mechanism for assuring the public and third party carriers that the medical profession is responsibly concerned about providing economic and effective medical service. Just as corporate boards and presidents of large business corporations must answer to their stockholders, we have an obligation to answer to the public.

Physicians are the only persons who can judge the performance of other physicians fairly. Granted that there are county, city and even hospital peer review mechanisms which are performing well; however, as we plan today for tomorrow, we must have an overall state organization under whose umbrella the subgroups must function if we are to successfully deal with the Social Security Administrators at the federal level.

Again, I must emphasize that the Health Care Foundation is set up in such a way as to assess (1) quantity of medical services, (2) quality of medical services, (3) cost of medical services, (4) in evaluating the above three, hopefully an educational program can be developed in an effort to ascertain areas of weakness among our membership where postgraduate or continued medical education will be most helpful, (5) a judicial committee has also been established whereby chronic offenders or abusers of professional privileges can be appropriately dealt with, and last but not least, (6) a state peer review organization, which is strong, will have the mechanism whereby a single individual physician who is in trouble with a third party carrier concerning any one of the first three objectives can appeal to his peers for assessment of his professional performance. If in the eyes of his peers, his performance is fitting and proper, then this physician will have (for the first time in the history of our state organization) a strong arm of the total medical community to support his position so that final settlement with an intermediary will be palatable.

As I close this year of presidential responsibilities, I realize it is indeed fortunate for our entire profession that the President has about him such able men as those who sit on the Council of MSMA and are guided in their deliberations by their Chairman, Walter Gunn of St. Louis.

I will be forever indebted to the Past-Presidents of this organization and especially to the Immediate Past-President, Doyle C. McCraw of Bolivar. The Secretary, Jack Matthews of Jefferson City, and the Treasurer, Max Franklin of St. Louis, have rendered invaluable service. My sincere appreciation also goes to our AMA Delegates and Alternates for their help and cooperation.

I especially want to thank the chairmen and members of all the commissions and committees of MSMA who have been so active during this past year, the first year of our reorganized commission and committee structure.

Any President, the Council and your entire MSMA organization would function very ineffectively without the wonderful staff at Jefferson City guided by your Executive Secretary, Ray McIntyre. The loyalty and devotion evidenced by the entire staff, Bob Carroll, Royal Cooper, Tom Fox and all of the wonderful ladies whose secretarial assistance and untiring devotion to the responsibility to keep the "show on the road" should be inspiring to every member of MSMA.

A special thanks goes to your President-Elect, Gerald Miller, as well as Hector W. Benoit of Kansas City for their invaluable guidance and assistance in exploring and developing the peer review structure and launching the Health Care Foundation.

Your incoming President, Gerald Miller, brings with him a wealth of knowledge and expertise by virtue of his long association with Blue Cross and Blue Shield throughout the western part of the state. I have explicit confidence in Jerry's ability to pilot the "Missouri Medical Ship" through any rough waters that may develop in 1971-1972.

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Have You Made Your Reservations?

Woman's Auxiliary



This is my last column and I must confess I relinquish all the responsibilities of the office of President of the Woman's Auxiliary to the Missouri State Medical Association with both joy and regret. It has been inspiring to work with the dedicated leaders and members of the Association and your outstanding Staff; it has been inspiring to work with Auxiliary leaders and members all over the nation and throughout Missouri.

It is with regret, however, that I consider the apathy among some of our membership—both in the Association and in the Auxiliary. There are so many more positive jobs we could be doing with more willing members. I wish it were possible to convince *all* our members and prospective members of the importance of participating in the democratic processes of organized medicine.

In 1892, Robert Louis Stevenson said, "So long as we love, we serve; so long as we are loved by others, I would almost say that we are indispensable; and no man is useless while he has a friend." On this positive note, I will tell you my life is immeasurably richer for having served you and, perhaps, the Auxiliary is no less strong or vital for my having served. It is my hope that the joy of serving will motivate others to the same course of action.

Thank you for honoring our Auxiliary with all that you do for us and thank you for allowing me to represent your Association through its Auxiliary with honor. It has been a responsibility filled with pleasure.



Mrs. William M. Walker
President

EDITORIAL

THE OTHER SCHOOLS

In our enthusiasm to see the new medical school begin its first students, we tend to lose track of the larger picture in medical education. It is true that the Missouri legislature has appropriated money for the Kansas City school construction. It is also true that not one cent has been funded by the state for operational expenses of the school or the hiring of faculty. This fragile ovum represents an idea submitted by all of us and has been fertilized by state and federal funds. But it is traveling an uncertain path toward implantation.

Unfortunately, in Columbia a serious illness has begun and may lead to crippling of the medical school which has consistently given us encouragement and guidance in our own venture. The University of Missouri Medical Center has been caught up in the budgetary problems of the whole university. They have reduced their budget by over \$2 million in the present academic year by closing beds, terminating or not hiring employees, raising room charges drastically and accepting patients on their ability to pay. An emergency request of \$500,000-plus to help remedy this has been denied in a Missouri Senate Committee.

Their problem is fairly straightforward. The University funds have necessarily been spent on patient care as a part of health education. Even the Medicaid patients have placed a severe lug on school dollars which were intended for educating physicians, nurses and others. All of us know of sharply rising hospital costs. The standstill university budget hits hardest at the medical care facility where costs rise fastest.

The Board of Curators would do well to analyze its role as a health care provider with the view of separating hospital and patient care costs from education costs. A new philosophy of meeting these needs of education and care needs to be developed, so that the essential parts of each program are not withered by inflation.

Further, the plight of the other medical schools, both in Missouri and Kansas need our attention. We cannot turn deaf ears on private schools simply to further the economic ends of our own area facility. Kansas University is having the same problem of dealing with a legislature that depends on a property tax base responding slowly to inflation.

What is the answer to this problem of health care, health education and inflation? First, the universities must look upon themselves as being in the patient care business and organize the financing of this effort appropriately. Second, the support of medical education by the federal government needs to be instituted rapidly and substantially. Third, state governments must realize that their income is among those hardest hit by rising costs, because so much of it is based on property taxes which change slowly, and take necessary action.

It is interesting that Harvard University does not own a hospital. If our own schools separate these costs of care and education and deal with each one, perhaps they will arrest the progress of this essential monetary deficiency while the vital signs are still with the patient.

ANDREW McCANSE, M.D., Editor
Greater Kansas City Medical Bulletin

In Memoriam

Graham, James W., M.D., Kansas City, a graduate of Ensworth Medical College, 1909; member Jackson County Medical Society; age, 93; died Nov. 7, 1970.

Evans, Harry Troy, M.D., Branson, a graduate of Washington University, 1912; member Ozarks Medical Society; age, 84; died Jan. 21, 1971.

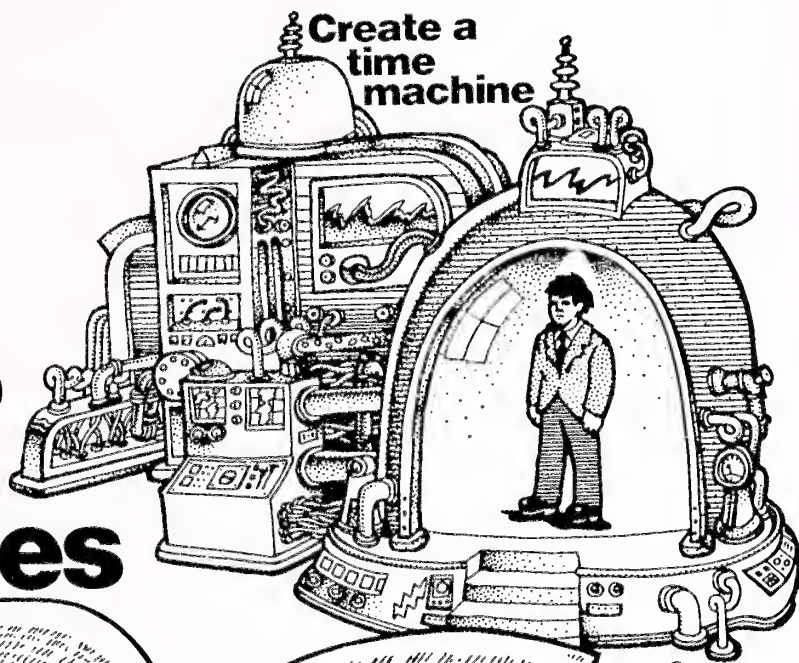
Johnson, William Alexander, M.D., Kansas City, a graduate of Howard University, 1926;

member Jackson County Medical Society; age, 73; died Feb. 3, 1971.

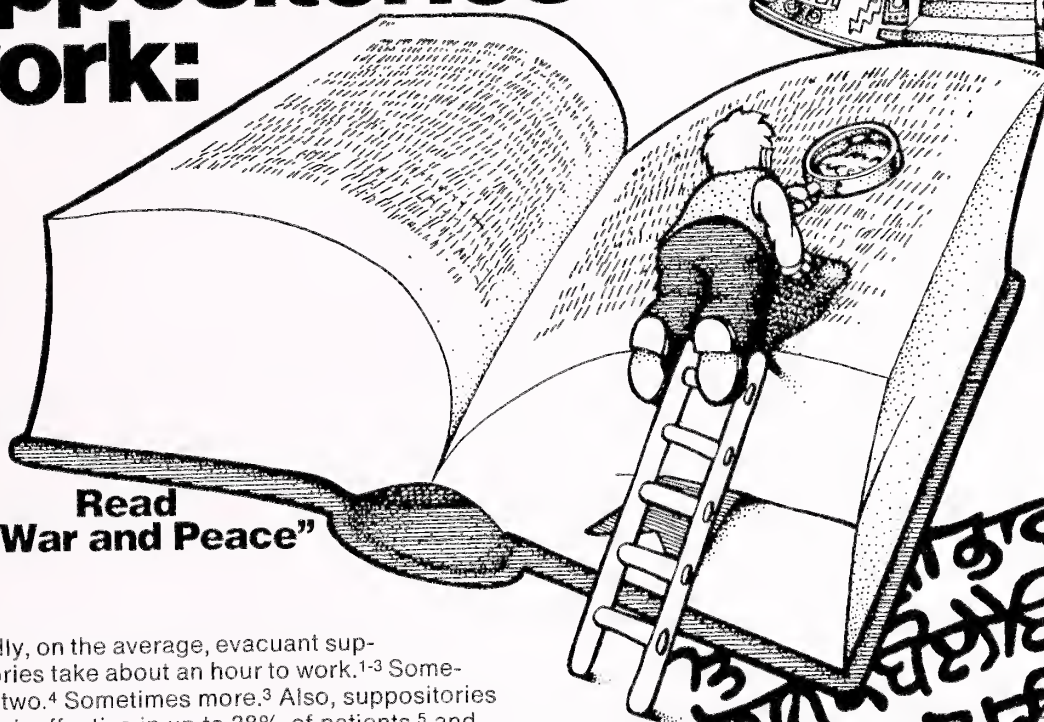
Cresswell, Geo. F., M.D., Potosi, a graduate of Washington University, 1918; member Mineral Area Medical Society; age, 78; died Feb. 8, 1971.

Ganley, William C., M.D., Kansas City, a graduate of St. Louis University, 1930; member Jackson County Medical Society; age, 67; died Feb. 9, 1971.

What to do until suppositories work:



Read
"War and Peace"



Actually, on the average, evacuant suppositories take about an hour to work.¹⁻³ Sometimes two.⁴ Sometimes more.³ Also, suppositories can be ineffective in up to 38% of patients,⁵ and not infrequently produce smarting, burning and tenesmus.⁶

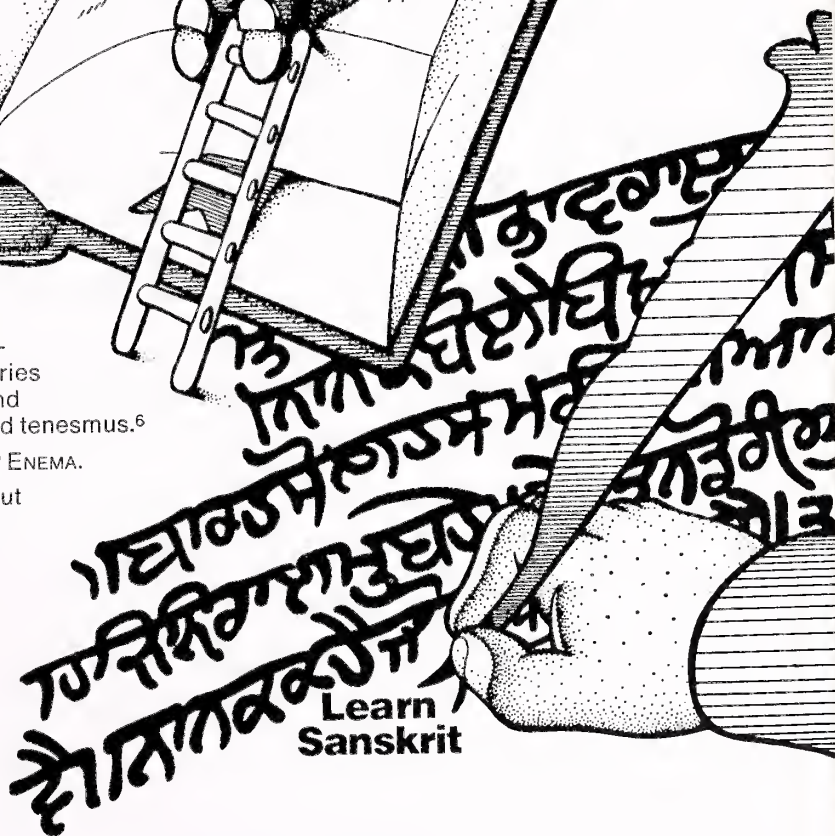
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FLEET ENEMA works within 2 to 5 minutes without pain or spasm. FLEET ENEMA induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool.

FLEET ENEMA avoids the irritation common with soapsuds enema. And FLEET ENEMA is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

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Much better.



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Sanskrit

Warning: Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present. Caution: Do not administer to children under two years of age unless directed by a physician. References: 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriatr Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964.



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Continuing Education Coming Events

- | | |
|-------------|---|
| April 5-7 | Ophthalmology: Recent Advances in Medical and Neurophthalmology
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| April 7-8 | Urology Seminar
M.U. Medical Center and Extension Division and
Kansas City General Hospital
Plaza Motel, 47th & Main, Kansas City |
| April 12-14 | Anesthesiology
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| April 26-30 | Pediatric Radiology
Continuing Medical Education, M.U. School of Medicine,
Children's Mercy Hospital, Kansas City |
| May 3-4 | Symposium—Coronary Artery Disease: Medical and Surgical Management
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| May 6-7 | Symposium—Inhalation Therapy
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| May 7-9 | Missouri Governor's Conference on Arthritis
Ramada Inn, Jefferson City 65101 |
| May 12-13 | Spring Clinical Conference
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| May 14 | Symposium—Infectious Diseases
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| May 21 | Ninth Annual Pediatric Seminar—"Children and Animals"
Baptist Memorial Hospital
6601 Rockhill Rd., Kansas City 64131 |

Sex Educators to Meet in St. Louis on April 15-18

Sex Education Outside the Classroom and Clinic will be the theme of the Fourth Annual Meeting of the American Association of Sex Educators and Counselors on April 15-18, 1971 at the Sheraton-Jefferson Hotel in St. Louis.

The first day will be devoted to personal growth sessions in small groups. April 16-18 will include meetings devoted to an examination of the report of the Commission on Obscenity and

Pornography, the Erotic Stimuli of the Mass Media, the question of abortion, the Masters and Johnson research and a dialogue involving the question of homosexuality.

Interested persons and groups are invited to attend or to have representation. All registration inquiries should be addressed to Mr. Robert E. Simpson, Executive Director, Social Health Association, 1118 Hampton 63139, Phone 781-6550.

County Society News

FIRST DISTRICT

COUNCILOR

JOHN N. MARTIN, M.D., ST. JOSEPH

GRAND RIVER MEDICAL SOCIETY

Twenty-nine members and guests met at the Chillicothe Country Club on February 11 for a social hour at 6:30 PM and dinner.

The clinical portion of the meeting was conducted by Patrick C. Reden, M.D. and Sam Kirkpatrick, M.D. assistant professors of obstetrics and gynecology at the University of Missouri Medical Center in Columbia. Their subject was surgical intervention in the complications of pregnancy and its indications, implications and techniques.

The President announced that Warren Allen, M.D., representing the county medical societies in Northwest Missouri (Andrew, Grand River, Clinton and Platte Counties) had resigned as a member of the Blue Shield Board of Directors. Frank R. Daley, M.D., was nominated as a candidate for this position. Other candidates are to be nominated by the other four county societies involved and ballots will be mailed to the members for individual voting.

FRANK R. DALEY, M.D., *Secretary*

NINTH DISTRICT

COUNCILOR

E. A. STRICKER, M.D., ST. JAMES

SOUTH CENTRAL COUNTIES MEDICAL SOCIETY

The South Central Counties Medical Society met on February 24 at the Holiday Inn, West Plains. Dr. and Mrs. W. T. Morgan of West Plains served as host and hostess.

After dinner, the ladies went to the Morgan home for the evening.

The program was presented by Don Vollman, M.D., pathologist of Jonesboro, Ark., who discussed the "Bacteriology of Urethral Catheterization."

Present at the meeting were Dr. and Mrs. Morgan, Dr. and Mrs. M. L. Fowler and Dr. and Mrs. R. H. Smith of West Plains; Dr. and Mrs. C. F. Smith of Willow Springs; Dr. and Mrs. J. A. Hasek of Mountain Grove; and Dr. and Mrs. Jack N. Wiles, of West Plains.

JACK N. WILES, M.D., *Secretary*

TENTH DISTRICT

COUNCILOR

EUGENE T. HANSBROUGH, M.D.,
POPLAR BLUFF

MINERAL AREA MEDICAL SOCIETY

The Mineral Area Medical Society met on February 25 in Farmington. Present were Drs. Paul Dennis, Juan Cancelada, Calixto Arguelles, Javier Pichardo, Kirby Turney, Robert Dettmer, Edward Mardini, C. H. Appleberry, Metin Arat, Raj Mohapatra, Aillen Vera, Emmett Hocht, C. W. Chastain, Normal Farmer and G. L. Watkins.

President Edward Mardini presided at the business meeting. The minutes of the January meeting were read and approved.

Doctor Chastain reported that Senate Bill 9 had been passed by the Senate and was now before the House of Representatives. The bill would require medical staff membership of physicians and dentists practicing in hospitals in the state of Missouri.

(Continued on page 273)

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91 control tests, 2 clinical assays: Beginning with the USP iodine assay and continuing through chromato-

graphic analysis for T_4 and T_3 content and including testing in hypothyroid humans—Proloid is made as precise as the natural product can get, batch after batch.

New 2 grain tablet: Precision extends to dosage. With the introduction of a new 2 grain tablet, titration can be even more conveniently achieved with the full range of Proloid dosages: $\frac{1}{4}$, $\frac{1}{2}$, 1, $1\frac{1}{2}$, the new 2, 3, and 5 grain tablets.



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Proloid® (thyroglobulin)

Description: Proloid (thyroglobulin) is obtained from a purified extract of frozen hog thyroid. It contains the known calorigenically active components, sodium levothyroxine (T_4) and sodium liothyronine (T_3). Proloid (thyroglobulin) conforms to the primary USP specifications for desiccated thyroid—for iodine based on chemical assay—and is also biologically assayed and standardized in animals.

Chromatographic analysis to standardize the sodium levothyroxine and sodium liothyronine content of Proloid (thyroglobulin) is routinely employed.

The ratio of T_4 and T_3 in Proloid (thyroglobulin) is approximately 2.5 to 1.

Proloid (thyroglobulin) is stable when stored at usual room temperature.

Indications: Proloid (thyroglobulin) is thyroid replacement therapy for conditions of inadequate endogenous thyroid production: e.g., cretinism and myxedema. Replacement therapy will be effective only in manifestations of hypothyroidism.

In simple (nontoxic) goiter, Proloid (thyroglobulin) may be tried therapeutically, in non-emergency situations, in an attempt to reduce the size of such goiters.

Contraindication: Thyroid preparations are contraindicated in the presence of uncorrected adrenal insufficiency.

Warnings: Thyroglobulin should not be used in the presence of cardiovascular disease unless thyroid-replacement therapy is clearly indicated. If the latter exists, low doses should be instituted beginning at 0.5 to 1.0 grain (32 to 64 mg) and increased by the same amount in increments at two-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid, and dosage should be started at a very low level and increased gradually.

Precaution: As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131} I resin sponge uptake, T_3 ^{131} I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Instructions for Use: The following conversion table lists the approximate equivalents of other thyroid preparations to Proloid (thyroglobulin) when changing medication from desiccated thyroid, T_4 (sodium levothyroxine), T_3 (sodium liothyronine), or T_4/T_3 (liotrix).

Dose of Proloid (thyroglobulin)	Dose of desiccated thyroid	Dose of T_4 (sodium levothyroxine)	Dose of T_3 (sodium liothyronine)	Dose of liotrix (T_4/T_3)
1 grain	1 grain	0.1 mg	25 mcg	#1 (60 mcg/15 mcg)
2 grains	2 grains	0.2 mg	50 mcg	#2 (120 mcg/30 mcg)
3 grains	3 grains	0.3 mg	75 mcg	#3 (180 mcg/45 mcg)
4 grains	4 grains	0.4 mg	100 mcg	
5 grains	5 grains	0.5 mg	125 mcg	

In changing from Thyroid USP to Proloid (thyroglobulin), substitute the equivalent dose of Proloid (thyroglobulin). Each patient may still require fine adjustment of dosage because the equivalents are only estimates.

Overdosage Symptoms: Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

How Supplied: $\frac{1}{4}$ grain; $\frac{1}{2}$ grain; scored 1 grain; $1\frac{1}{2}$ grain; 3 grain; and scored 5 grain tablets, in bottles of 100 & 1000; and scored 2 grain tablets in bottles of 100.

Warner-Chilcott, Morris Plains, N. J. 07950

County Society News

(Continued from page 271)

Doctor Turner stated that he had attended the House hearing on this bill and that representatives of numerous hospitals and medical societies also were there. All presented endorsements for this bill, and there was no testimony in opposition.

Doctor Chastain reported that State Representatives Frank C. Ellis and Marvin L. Dinger, who represent parts of the area served by the Mineral Area Medical Society, had expressed support for this legislation, as had Senator Earl R. Blackwell and Senator Albert M. Spradling. Senator Spradling sponsored Senate Bill 9.

Doctor Mardini reported that St. Louis Blue Shield had requested nominations for a member of the voting board from the Mineral Area. At the present time, Doctor Chastain is completing his second three-year term on this Board. It was moved, seconded and approved that Doctor Chastain be renominated for a third term.

Doctor Chastain reported that Dr. David Mainz, Fredericksburg, had moved from the area and that Dr. George Cresswell of Potosi had died. Since both members were Alternate Delegates to the MSMA Annual Session, the officers appointed Dr. Edward Mardini, Bonne Terre, as Alternate Delegate from Washington County and Dr. R. A. Huckstep, Farmington, as Alternate Delegate from Madison County.

Doctor Chastain moved and Doctor Mardini seconded the motion that the March meeting be held in conjunction with the dinner meeting being planned by the Medical Society Auxiliary on March 30 at the St. Francois Country Club and that the Society pay for the cost of the dinner. The motion passed unanimously.

The meeting was adjourned at 9:45 P.M.

C. W. CHASTAIN, M.D., Secretary



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New Members

Bienvenido Z. Abella, M.D., 6400 Prospect, Kansas City, has become a member of Jackson County Medical Society. Dr. Abella is a native of the Philippines, received his preliminary education at the University of the Philippines and his M.D. degree at the University of Santo Tomas in 1952. He specializes in general surgery.

Jaime A. Aguinaldo, M.D., 5535 Delmar, St. Louis, has become a member of St. Louis Medical Society. Dr. Aguinaldo is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the Far Eastern University in 1964. He specializes in internal medicine.

Richard F. Allison, M.D., Missouri State Sanatorium, Mt. Vernon, has become a member of Ozarks Medical Society. Dr. Allison is a native of Columbia, S. C., received his preliminary education at the University of South Carolina and his M.D. degree at South Carolina Medical College in 1942. He specializes in administration and pulmonary diseases.

Widad Bazzoui, M.D., Mid-Missouri Mental Health Center, Columbia, has become a member of Boone County Medical Society. Dr. Bazzoui is a native Baghdad, Iraq and received his M.D. degree at Royal Iraqi College in 1953. He specializes in psychiatry.

R. Wheatley Beard, M.D., Professional Bldg., Springfield, has become a member of Greene County Medical Society. Dr. Beard is a native of Pine Bluff, Ark., received his preliminary education at Southwestern University and his M.D. degree at the University of Tennessee in 1958. He specializes in neurology.

William J. Beard, M.D., 10236 Bunker Ridge Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Beard is a native of Woodbury, N. J., received his preliminary education at Muhlenberg College and his M.D. degree at Cornell University in 1947. He specializes in industrial medicine.

Florinio H. Bernabe, M.D., 8559 Ridge Ave., St. Louis, has become a member of St. Louis County Medical Society. Dr. Bernabe is a native of the Philippines, received his preliminary education at the University of the Philippines and his M.D. degree at the University of the

Philippines in 1965. He specializes in obstetrics and gynecology.

Ofelia M. Bernabe, M.D., 8559 Ridge Ave., St. Louis, has become a member of St. Louis County Medical Society. Dr. Bernabe is a native of the Philippines, received her preliminary education at the University of the Philippines and her M.D. degree at the University of the Philippines in 1965. She specializes in internal medicine.

Martin H. Boone, Jr., M.D., Professional Bldg., Springfield, has become a member of Greene County Medical Society. Dr. Boone is a native of Hamilton, Tex., received his preliminary education at the University of Texas and his M.D. degree at the University of Pennsylvania in 1948. He specializes in anesthesiology.

Robert M. Brown, M.D., 113 W. Hickory, Neosho, has become a member of Ozarks Medical Society. Dr. Brown is a native of Kansas City, received his preliminary education at Kansas University and his M.D. degree at Kansas University in 1963. He is in the general practice of medicine.

James G. Bucy, M.D., 4960 Audubon, St. Louis, has become a member of St. Louis Medical Society. Dr. Bucy is a native of Chicago, Ill., received his preliminary education at Haverford and his M.D. degree at Northwestern University in 1962. He specializes in urology.

August L. Cabonce, M.D., 751 St. Francois, Florissant, has become a member of St. Louis Medical Society. Dr. Cabonce is a native of the Philippines, received his preliminary education at Manila Central University and his M.D. degree at Manila Central University in 1956. He specializes in family practice.

George A. B. Cowan, M.D., 4949 Rockhill Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Cowan is a native of Scotland and received his M.D. degree at the University of Glasgow. He specializes in therapeutic radiology and nuclear medicine.

Horacio O. Del Rosario, M.D., 1984 Pickfair Dr., St. Louis, has become a member of St. Louis County Medical Society. Dr. Del Rosario is a native of Manila, Philippines, received his preliminary education at the University of Santo

Tomas and his M.D. degree at the University of Santo Tomas in 1954. He specializes in internal medicine.

James A. Diestelhorst, M.D., 12059 Ameling Rd., Hazelwood, has become a member of St. Louis County Medical Society. Dr. Diestelhorst is a native of St. Louis, received his preliminary education at Southern Illinois University and his M.D. degree at the University of Missouri in 1967. He specializes in internal medicine.

E. Grey Dimond, M.D., University of Missouri, Kansas City, has become a member of Jackson County Medical Society. Dr. Dimond is a native of St. Louis, received his preliminary education at Indiana University and his M.D. degree at Indiana University in 1944. He specializes in internal medicine (cardiology).

Darrel Duane Domann, M.D., Professional Bldg., Springfield, has become a member of Greene County Medical Society. Dr. Domann is a native of Ellsworth, Kan., received his preliminary education at Westminster College and his M.D. degree at the University of Missouri in 1963. He specializes in plastic and reconstructive surgery.

Walter G. Dukstein, M.D., 6400 Prospect, Kansas City, has become a member of Jackson County Medical Society. Dr. Dukstein is a native of Pittsburgh, Pa., received his preliminary education at the University of Pittsburgh and his M.D. degree at the University of Pittsburgh in 1956. He specializes in internal medicine (hematology and nuclear medicine).

Mariano N. Floro, Jr., M.D., 11115 New Halls Ferry Rd., Florissant, has become a member of St. Louis County Medical Society. He is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1958. He specializes in general surgery.

Gerald E. Fox, M.D., Methodist Hospital, St. Joseph, has become a member of Buchanan County Medical Society. He is a native of Forest City, Ia., received his preliminary education at Luther College and his M.D. degree at Marquette University in 1944. He specializes in pathology.

Nelson Greenlund, M.D., 900 S. Adams, Nevada, has become a member of the West Central Medical Society. Dr. Greenlund is a native of

Wichita, Kan., received his preliminary education at the University of Arizona and his M.D. degree at the University of Kansas in 1965. He specializes in general practice.

David Lee Garrison, M.D., 902 Edmond, St. Joseph, has become a member of Buchanan County Medical Society. Dr. Garrison is a native of Fairfield, Ill., received his preliminary education at the University of Illinois and his M.D. degree at the University of Illinois in 1966. He specializes in obstetrics and gynecology.

W. D. George, M.D., Monett, has become a member of Ozarks Medical Society. Dr. George is a native of Kansas City, Kan., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1968. He is in the general practice of medicine.

Antonio J. Gracia, M.D., St. Joseph State Hospital, St. Joseph, has become a member of Buchanan County Medical Society. Dr. Gracia is a native of South America, received his preliminary education at Colegio Del Rosario and his M.D. degree at National University in 1960. He specializes in psychiatry.

Jon E. Gustafson, M.D., 1509 West Truman Rd., Independence, has become a member of Jackson County Medical Society. Dr. Gustafson is a native of Davenport, Ia., received his preliminary education at Yale University and his M.D. degree at Washington University in 1962. He specializes in radiology.

Stratton W. Harrison, M.D., Professional Bldg., Springfield, has become a member of Greene County Medical Society. Dr. Harrison is a native of Marshall, received his preliminary education at Vanderbilt University and his M.D. degree at Temple University in 1955. He specializes in ophthalmology.

Joseph E. Hills, M.D., 1550 E. Sunshine, Springfield, has become a member of Greene County Medical Society. Dr. Hills is a native of Lawrenceburg, Tenn., received his preliminary education at the University of Louisville and his M.D. degree at the University of Louisville in 1963. He specializes in internal medicine (cardiology).

Paul C. Horn, M.D., 1905 Broadway, Cape Girardeau, has become a member of Cape Girardeau County Medical Society. Dr. Horn is a native of Indiana Harbor, Ind., received his preliminary education at Indiana University and

his M.D. degree at Indiana University in 1964. He specializes in pathology.

G. R. Hudson, M.D., 346 Woodland Ave., Moberly, has become a member of Chariton-Macon-Monroe-Randolph County Medical Society. Dr. Hudson is a native of McAlester, Okla., received his preliminary education at Northeast Missouri State College and his M.D. degree at Northwestern University in 1941. He is in the general practice of medicine (surgery).

Robert S. Hunt, M.D., 1834 Broadway, Cape Girardeau, has become a member of Cape Girardeau County Medical Society. Dr. Hunt is a native of Kansas City, received his preliminary education at Westminster College and his M.D. degree at Washington University. He specializes in surgery.

Ernest D. Johnson, M.D., 937 Broadway, Cape Girardeau, has become a member of Cape Girardeau County Medical Society. Dr. Johnson is a native of Mayfield, Ky., received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1964. He specializes in general radiology.

Karl J. Kurtz, M.D., 4320 Wornall Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Kurtz is a native of Chicago, Ill., received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1962. He specializes in urology.

Don G. Livingston, M.D., 2821 N. Ballas Rd., St. Louis, has become a member of St. Louis County Medical Society. Dr. Livingston is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1966. He specializes in pediatrics.

James M. Marsh, M.D., Pioneer Bldg., St. Joseph, has become a member of Buchanan County Medical Society. Dr. Marsh is a native of Steubenville, Ohio, received his preliminary education at John Carroll University and his M.D. degree at St. Louis University in 1956. He specializes in internal medicine and hematology.

Cresenciano A. Medrano, M.D., 56 Lincord Dr., St. Louis, has become a member of St. Louis County Medical Society. Dr. Medrano is a native of the Philippines, received his preliminary education at Far Eastern University and

his M.D. degree at the University of Santo Tomas in 1958. He specializes in obstetrics and gynecology.

Lina Ebro Medrano, M.D., Christian Northwest Hospital, Florissant, has become a member of St. Louis County Medical Society. Dr. Medrano is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1959. He specializes in internal medicine.

Romualdo L. Pe, M.D., State Hospital, St. Joseph, has become a member of Buchanan County Medical Society. Dr. Pe is a native of Palawan, Philippines, received his preliminary education at Letran College and his M.D. degree at the University of Santo Tomas in 1957. He is in the general practice of medicine.

Hector O. Pineda, M.D., 601 S. Brentwood, St. Louis, has become a member of St. Louis Medical Society. Dr. Pineda is a native of Manila, Philippines, received his preliminary education at Manila Central University and his M.D. degree at Manila Central University in 1964. He specializes in internal medicine.

Americo G. Ramos, M.D., 6700 Troost, Kansas City, has become a member of Jackson County Medical Society. Dr. Ramos is a native of Morelos, N.L., Mexico and received his preliminary education at the University of Nuevo Leon and his M.D. degree at the University of Nuevo Leon in 1948. He specializes in thoracic surgery.

Raymond A. Ritter, Jr., M.D., 1912 Broadway, Cape Girardeau, has become a member of Cape Girardeau County Medical Society. Dr. Ritter is a native of Cape Girardeau, received his preliminary education at Washington University and his M.D. degree at Washington University in 1962. He specializes in orthopaedic surgery.

Hunter Bryan Rogers, M.D., 819 Locust, St. Louis, has become a member of St. Louis County Medical Society. Dr. Rogers is a native of Memphis, Tenn., received his preliminary education at Georgetown University and his M.D. degree at Washington University in 1965. He is in the general practice of medicine (industrial surgery).

Chas. M. Singleton, II, M.D., 411 Nichols Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Singleton is a na-

tive of Kansas City, received his preliminary education at Princeton University and his M.D. degree at Washington University in 1962. He specializes in internal medicine.

Kenneth K. C. Siu, M.D., 515 E. High, Jefferson City, has become a member of Cole County Medical Society. Dr. Siu is a native of Hong Kong, China, received his M.D. degree at the University of Hong Kong in 1952. He specializes in general surgery.

Thomas P. Sweeney, M.D., Professional Bldg., Springfield, has become a member of Greene County Medical Society. Dr. Sweeney is a native of St. Louis, received his preliminary education at Washington University and his M.D. degree at the University of Missouri in 1964. He specializes in radiology.

Milagros E. Tiojanco, M.D., St. Joseph Hospital, Kansas City, has become a member of

Jackson County Medical Society. Dr. Tiojanco is a native of Manila, Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1964. He specializes in anesthesiology.

Virgilio C. Villadiego, M.D., Arrowood Dr., St. Louis, has become a member of St. Louis Medical Society. Dr. Villadiego is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1958. He specializes in general surgery.

Leslie Wise, M.D., 660 S. Euclid Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Wise is a native of Budapest, Hungary, received his preliminary education at the University of Sydney and his M.D. degree at the University of Sydney in 1958. He specializes in certified general surgery.

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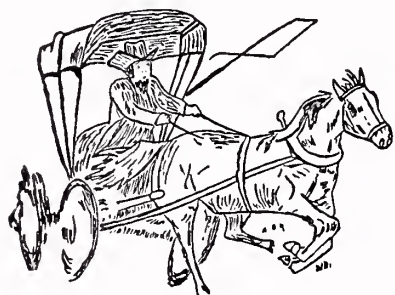
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Missouri Medicine in Review



FORTY YEARS AGO

An unusual opportunity to take a 58-day trip to Europe this summer in the company of other members at the very low price of \$895 is available to members of the Missouri State Medical Association. This service provides the members with first class accommodations on the *S. S. Montclare* of the Canadian Pacific Lines and railroad transportation and Class A hotels while in Europe.

The American Medical Association will meet in Philadelphia on June 8-12. When purchasing tickets, MSMA members are reminded to ask the ticket agent for a certificate showing that they purchased the ticket to Philadelphia. This will entitle the holder to return to St. Louis for one-half the regular fare. You cannot obtain this reduced return rate unless you have the certificate. On the basis of this one-and-one-half rate, the round trip railroad fare is \$52.23. The Pullman fare each way is \$8.10 for an upper berth, \$10.13 for a lower berth, \$28.50 for a compartment and \$36.00 for a drawing room.

Forty insane patients were transferred from the St. Louis City Sanatorium to State Hospital No. 3 at Nevada recently because the Sanatorium was overcrowded. The patients, who are residents of St. Louis, have no relatives who would be inconvenienced by visiting them in Nevada. This makes a total of 250 patients recently transferred from the St. Louis Sanatorium to state hospitals. The city of St. Louis pays the state \$18.00 per month for the care of each patient.

TWENTY-FIVE YEARS AGO

Membership in Surgical Care, Inc. of Kansas City, the physician-sponsored plan which is serving Missouri people in 19 counties in the northwest section of the state, now exceeds 60,000

persons. Reserves for future contingencies are more than adequate and it is expected that enrollment will approximate 100,000 persons by the end of 1946.

Penicillin in tablet form for civilian use went on sale in Mexico City on June 5, according to an announcement by H. S. Howard, president of Wyeth, Inc. of Philadelphia, one of the pioneer producers of the "wonder drug" in this country. It is the first time penicillin has been sold in tablet form for commercial purposes anywhere.

The South Central Counties Medical Society held a dinner meeting at the Elliott Hotel in Mountain Grove on January 25 with the following physicians present: Drs. J. R. Mott, Hartville; A. Fuson, Mansfield; L. T. Van Noy, Norwood; R. A. Ryan, R. W. Denney, A. C. Ames and J. E. Lewis, Mountain Grove; Garrett Hogg, Cabool; L. M. Dillman, Houston; C. F. Callihan, Willow Springs; and Rollin H. Smith and E. C. Bohrer, West Plains. Application for membership by Dr. Rollin H. Smith was presented. After a letter from the Secretary of Bates County Medical Society certifying that Doctor Smith was a member in good standing was read, he was elected to membership without being referred to the Board of Censors.

TEN YEARS AGO

Herbert S. Goldberg, Ph.D., Columbia reports: "In 1959, two reports from the Beecham Research Laboratories, Surrey, England, were issued which forecast a major breakthrough in the chemotherapy of staphylococcal disease. Research investigators isolated from a fermentation process by penicillium chrysogenum, 6 aminopenicillanic acid, the structural skeleton of penicillin. This discovery made it possible to combine biosynthesis with chemosynthesis to produce an unlimited number of variations in penicillin. There is no clear cut evidence at this time that any difference exists between commercially available, natural and synthetic penicillins with regard to hypersensitivity."

The Independence Junior Chamber of Commerce recently presented its annual distinguished service award to Harry Jones, M.D., of Independence.—George L. Watkins, M.D., Farmington, was elected chief-of-staff of the Madison County Memorial Hospital in Fredericktown.

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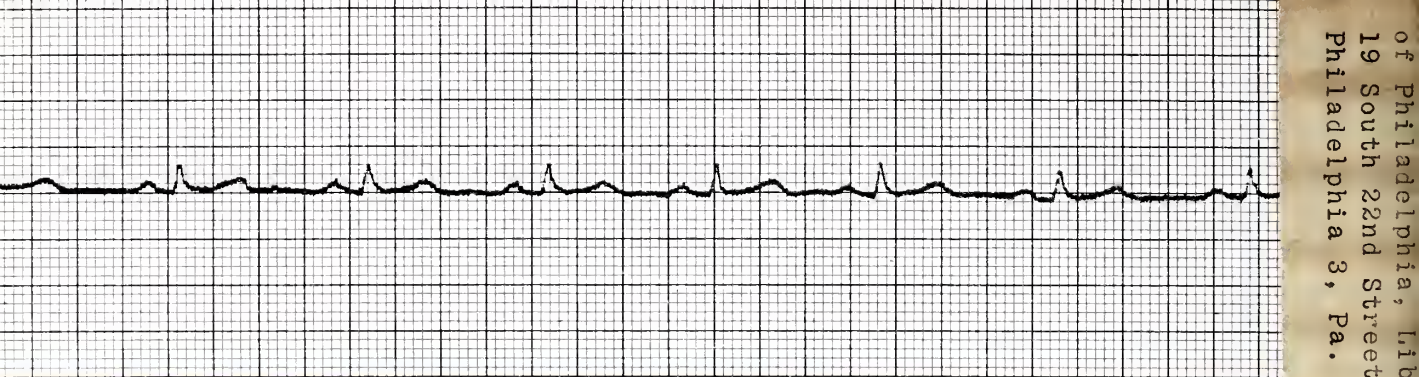
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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation

or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



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Missouri Medicine

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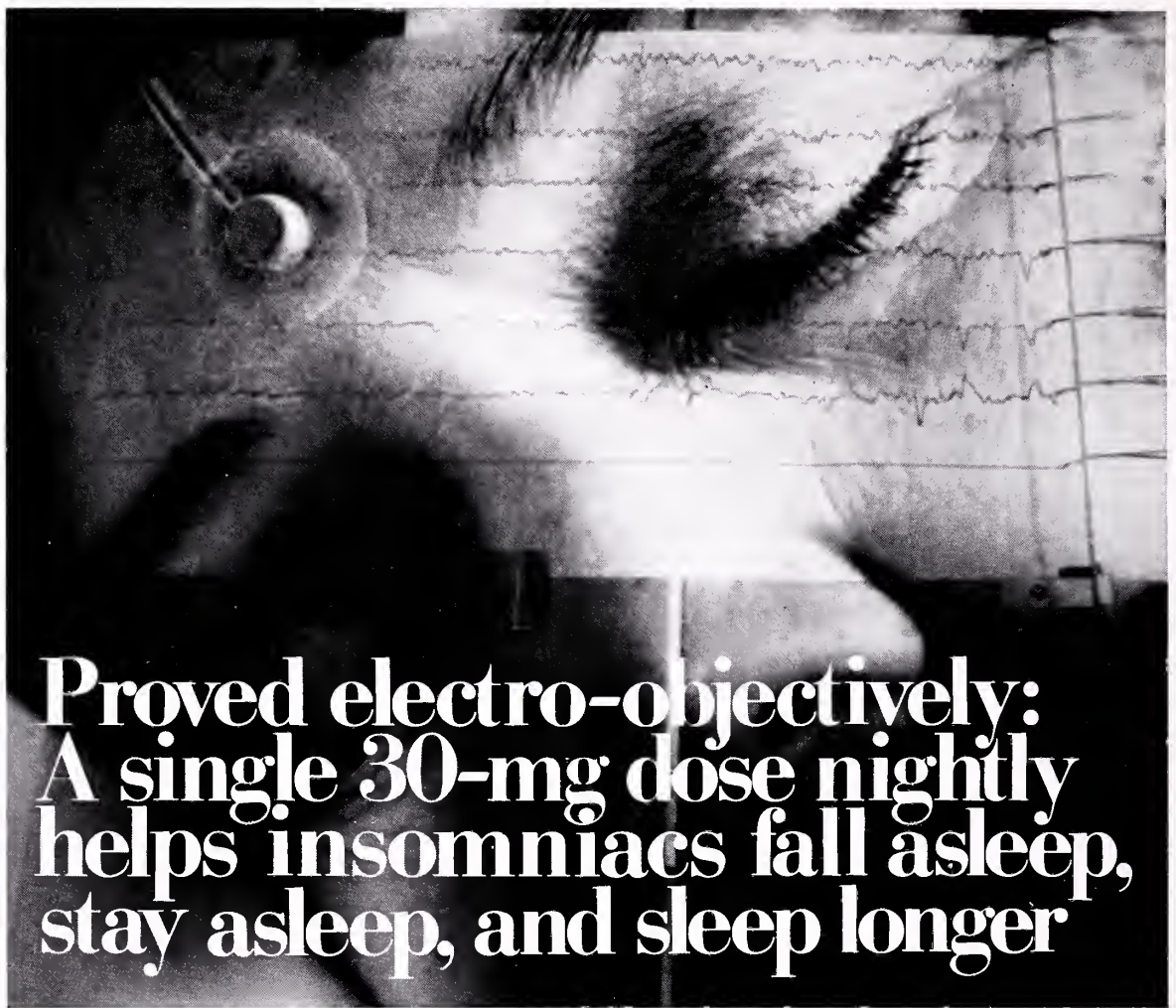
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University of Missouri Medical Center
SPECIAL ISSUE



Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro-oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.^{1,2,3}

Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,¹ Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.

Confirmed clinically

Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

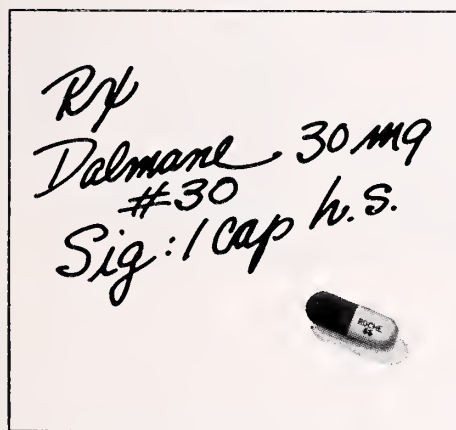
Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

In summary, Dalmane is useful in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. It can be used effectively in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep.

Dalmane (flurazepam HCl) is generally well tolerated

In most instances in which adverse effects with Dalmane were reported, they were mild, infrequent and seldom required discontinuation of the drug. Dizziness, drowsiness, lightheadedness and the like were the side effects most frequently noted, particularly in elderly or debilitated patients.³ Instances of hepatic dysfunction, paradoxical reactions (excitement) and hypotension are rare with Dalmane, and morning hang-over is relatively infrequent. In studies to date the effectiveness of Dalmane for recommended periods of use is maintained without need to increase dosage.

References: 1. Kales, A., et al.: "Effectiveness of Sleep Medications: All-Night EEG Studies of Hypnotic Drugs," in Proc. 7th Internat. Cong. Electroencephal. and Clin. Neurophysiol., San Diego, Calif., Sept. 13-19, 1969. 2. Kales, A., et al.: "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," in Kales, A. (ed): *Sleep: Physiology and Pathology*, Phila., Lippincott, 1969, p. 331. 3. Data on file, Medical Department, Hoffmann-La Roche Inc.



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Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.



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Missouri Medicine

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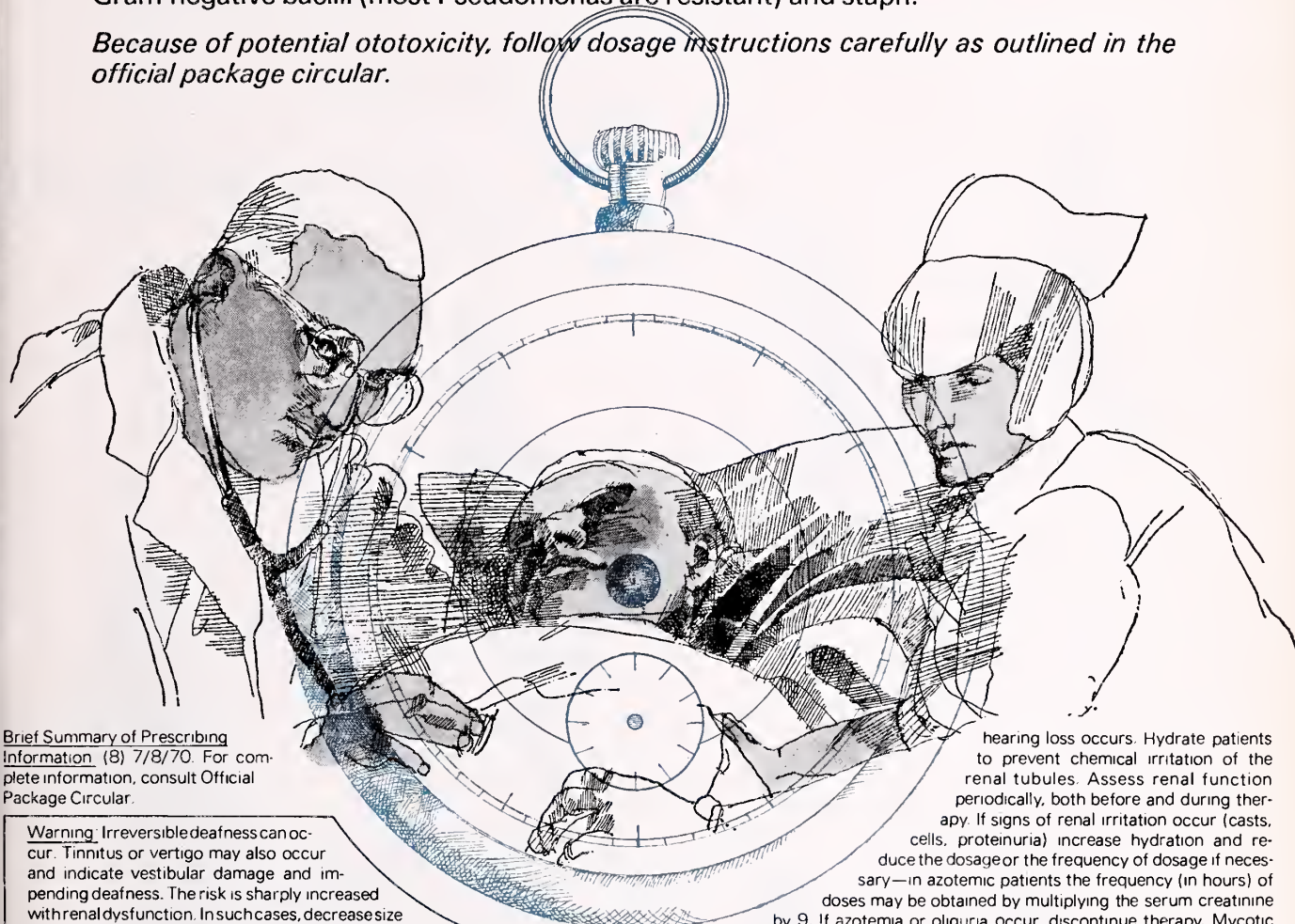
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in severe systemic infections—postoperative bacteremia, Gram-negative/staph pneumonias or neonatal sepsis—Kantrex® (kanamycin sulfate) is often indicated before results of customary sensitivity tests can be reported. Clinical response is often seen within 24-48 hours in susceptible infections, with remission soon after.

10 years of experience confirm the continuing effectiveness of Kantrex® against many Gram-negative bacilli (most *Pseudomonas* are resistant) and staph.

Because of potential ototoxicity, follow dosage instructions carefully as outlined in the official package circular.



Brief Summary of Prescribing Information (8) 7/8/70. For complete information, consult Official Package Circular.

Warning: Irreversible deafness can occur. Tinnitus or vertigo may also occur and indicate vestibular damage and impending deafness. The risk is sharply increased with renal dysfunction. In such cases, decrease size and frequency of doses. Discontinue kanamycin and check hearing if azotemia increases. Watch carefully for ototoxicity in older patients and patients receiving more than 15 Gm. of kanamycin. To avoid neuromuscular paralysis with respiratory depression, postpone intraperitoneal instillation in post-operative patients until recovery from anesthesia and muscle relaxants is complete. Avoid concurrent use of other ototoxic drugs including ethacrynic acid. Safety in pregnancy is not established.

Indications: Serious infections due to susceptible strains of *E. coli*, *Proteus* sp., *Enterobacter aerogenes*, *K. pneumoniae*, *Serratia marcescens* and *Mima-Herellea*. Culture and sensitivity studies should be performed.

Contraindications: A history of hypersensitivity to the drug. Prior auditory damage by kanamycin or other agents may be a contraindication if effective alternative therapy is available.

Precautions: Obtain audiograms before and during therapy in patients with renal dysfunction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or

hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules. Assess renal function periodically, both before and during therapy. If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary—in azotemic patients the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy. Mycotic or bacterial superinfection may occur.

Adverse Reactions: Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias.

Dosage and Administration: The maximum total daily dose should not exceed 1.5 Gm. by all routes of administration. The usual dose is 7.5 mg./Kg./12 hours I.M. The average adult dose is 1 Gm. daily. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.

Supplied: Rubber capped vials as a ready-to-use sterile aqueous solution in two concentrations: 0.5 Gm. in 2 ml. and 1.0 Gm. in 3 ml. Also available—Pediatric Injection 75 mg. in 2 ml.

A.H.F.S. Category 8:12,28

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91 control tests, 2 clinical assays: Beginning with the USP iodine assay and continuing through chromato-

graphic analysis for T_4 and T_3 content and including testing in hypothyroid humans—Proloid is made as precise as the natural product can get, batch after batch.

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can get

Proloid[®]
(thyroglobulin)

the natural for precision

Proloid® (thyroglobulin)

Description: Proloid (thyroglobulin) is obtained from a purified extract of frozen hog thyroid. It contains the known calorigenically active components, sodium levothyroxine (T_4) and sodium liothyronine (T_3). Proloid (thyroglobulin) conforms to the primary USP specifications for desiccated thyroid—for iodine based on chemical assay—and is also biologically assayed and standardized in animals.

Chromatographic analysis to standardize the sodium levothyroxine and sodium liothyronine content of Proloid (thyroglobulin) is routinely employed.

The ratio of T_4 and T_3 in Proloid (thyroglobulin) is approximately 2.5 to 1.

Proloid (thyroglobulin) is stable when stored at usual room temperature.

Indications: Proloid (thyroglobulin) is thyroid replacement therapy for conditions of inadequate endogenous thyroid production: e.g., cretinism and myxedema. Replacement therapy will be effective only in manifestations of hypothyroidism.

In simple (nontoxic) goiter, Proloid (thyroglobulin) may be tried therapeutically, in non-emergency situations, in an attempt to reduce the size of such goiters.

Contraindication: Thyroid preparations are contraindicated in the presence of uncorrected adrenal insufficiency.

Warnings: Thyroglobulin should not be used in the presence of cardiovascular disease unless thyroid-replacement therapy is clearly indicated. If the latter exists, low doses should be instituted beginning at 0.5 to 1.0 grain (32 to 64 mg) and increased by the same amount in increments at two-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid, and dosage should be started at a very low level and increased gradually.

Precaution: As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131} I resin sponge uptake, T_3 ^{131} I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Instructions for Use: The following conversion table lists the approximate equivalents of other thyroid preparations to Proloid (thyroglobulin) when changing medication from desiccated thyroid, T_4 (sodium levothyroxine), T_3 (sodium liothyronine), or T_4/T_3 (liotrix).

Dose of Proloid (thyroglobulin)	Dose of desiccated thyroid	Dose of T_4 (sodium levothyroxine)	Dose of T_3 (sodium liothyronine)	Dose of liotrix (T_4/T_3)
1 grain	1 grain	0.1 mg	25 mcg	± 1 (60 mcg/15 mcg)
2 grains	2 grains	0.2 mg	50 mcg	± 2 (120 mcg/30 mcg)
3 grains	3 grains	0.3 mg	75 mcg	± 3 (180 mcg/45 mcg)
4 grains	4 grains	0.4 mg	100 mcg	
5 grains	5 grains	0.5 mg	125 mcg	

In changing from Thyroid USP to Proloid (thyroglobulin), substitute the equivalent dose of Proloid (thyroglobulin). Each patient may still require fine adjustment of dosage because the equivalents are only estimates.

Overdosage Symptoms: Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

How Supplied: $\frac{1}{4}$ grain; $\frac{1}{2}$ grain; scored 1 grain; $1\frac{1}{2}$ grain; 3 grain; and scored 5 grain tablets, in bottles of 100 & 1000; and scored 2 grain tablets in bottles of 100.

Warner-Chilcott, Morris Plains, N. J. 07950

In Memoriam

Forgrave, John R., M.D., St. Joseph, a graduate of Northwestern University, 1937; member Buchanan County Medical Society; age, 60; died Feb. 21, 1971.

Hanes, Robert L., M.D., Kansas City, a graduate of the University of Kansas, 1953; member Jackson County Medical Society; age, 44; died Feb. 25, 1971.

Kepler, Earl C., M.D., Fulton, a graduate of the Chicago College of Medicine, 1913; member Callaway County Medical Society; age, 78; died March 6, 1971.

Gonser, Karl B., M.D., Sedalia, a graduate of the University of Kansas, 1940; member Pettis County Medical Society; age, 56; died March 9, 1971.

Glick, Harry N., M.D., St. Louis, a graduate of St. Louis University, 1923; member St. Louis Medical Society; age, 77; died March 12, 1971.

Hanser, S. Albert, M.D., St. Louis, a graduate of St. Louis University, 1937; member St. Louis Medical Society; age, 57; died March 15, 1971.

Brown, James Barrett, M.D., St. Louis, a graduate of Washington University, 1923; member St. Louis Medical Society; age, 71; died March 18, 1971.

Larimore, Joseph W., M.D., St. Louis, a graduate of Washington University, 1913; member St. Louis Medical Society; age, 84; died March 22, 1971.

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Medical Center

A Review of 1970-1971

WILLIAM D. MAYER, M.D., *Dean and Director*

SINCE IT IS IMPOSSIBLE in a brief article to review all or even the most significant events of the previous year within the University Medical Center, I have chosen to limit my remarks this year to one key issue affecting the Medical Center during this last year, the budget crisis, because this issue has had a major impact on this institution notably during the past year, and also has the potential of continuing importance to the Medical Center in years ahead.

In July, 1970, your Medical Center found itself faced with a projected budget deficit for fiscal year 1970-1971 in the amount of \$2.2 million. This potential deficit was the result of nationwide increases in medical care costs. The costs of operating acute general hospitals in the United States rose 17.3% in 1969 over the previous year. The cost increase of the University Hospital was quite comparable at 17.4%. In that we provide a significant component of indigent care for the citizens of the State of Missouri, it was impossible for us to meet these kinds of cost increases totally from collections for services rendered. For this component of care, we are totally dependent upon dollars from the State Legislature.

This deficit was further worsened by the fact that in the first five months of 1970-1971, basic care provided in the University Hospital increased approximately 8% over the comparable period for the previous year. Thus, with no increase in funds available to us from the State Legislature, we faced a potential \$2.2 million budget deficit if we continued our 1969-1970 expenditures rates and available services further into this current year.

As a consequence, we implemented steps, including hospital rate changes, anticipated to bring in \$900,000 additional income. At the same time, we cut \$1.3 million from our budget which included, in addition to cutbacks in the Hospital, a \$450,000 cut in the budget in the School of Medicine.

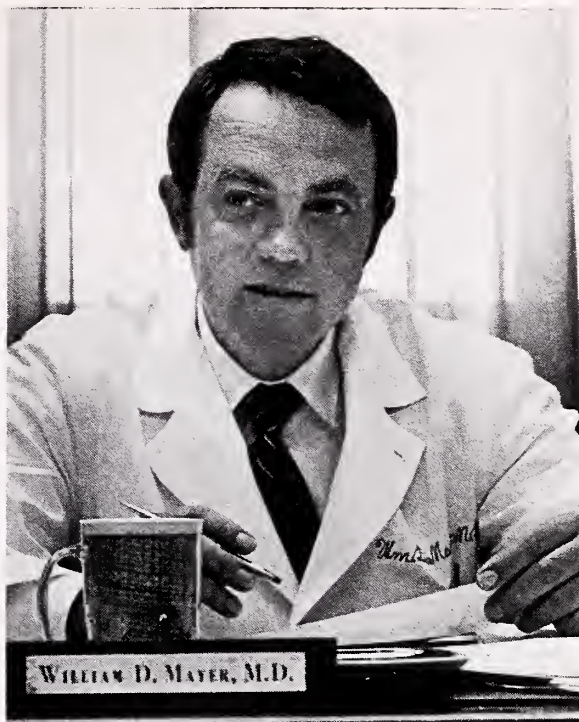
Although the proposed increases and reductions were implemented by January 1 in order to assure fiscal balance by June 30, 1971, we felt the steps which had been taken were sufficiently rigorous to reduce the operation of the University Hospital below a level which the State should find acceptable.

Accordingly, a request was made to the Missouri Legislature by the University for an emergency appropriation for the Medical Center for the period March 1 to June 30, 1971 in the amount of \$544,660 in order to reinstitute the most critical services which we had deleted, including the reopening of a 36-bed patient care unit which had been closed down. Following a sequence in January, February and March of 1971 which included approval by the Missouri House, disapproval by the Senate Appropriations Committee and, finally, approval by a Joint Conference Committee of the House-Senate, a bill was passed by April 1 which authorized an emergency expenditure by the University of \$408,500, of which \$65,000 was to go to the new school of medicine at the University of Missouri-Kansas City and the remainder to the University Hospital in Columbia. A reduction of 15% in that authorization by the State Budget Office finally made available to the Medical Center approximately \$300,000. This has made it possible for us to reopen the closed unit and reinstitute some of the most critically needed, previously deleted services.

We are still faced, however, with a level of function and level of service offered in 1970-1971 that is below that of 1969-1970. The scars which have been created, however, by this year's fiscal crisis are real, indeed, and although the institution has been "held together by baling wire," the potentiality of an ultimate downhill course remains quite real as the State grapples with its continuing fiscal problems. There is little doubt that a second year in a row of a no-increase budget in the face of rising health

care costs will result in the beginning deterioration of a medical center which had moved, and was continuing to move until this past year, toward a level of function and performance of which all citizens of the State could be justifiably proud. Having had an opportunity to participate in the growth and development of the Medical Center over the past ten years, it is painful to anticipate the beginning deterioration of an institution which has consumed the energies of so many individuals in the 15 years of its existence. Needless to say, we are hopeful that the current Legislature will see fit to face the State's budget crisis head on in order that the services which we render, and those which are rendered by the total University, might continue. Ultimately, it remains to the Legislature, and to the citizens of the State whom they represent, whether the direction will continue to be downward.

Released during this past year was a comprehensive report by the Carnegie Commission on Higher Education entitled *Higher Education and the Nation's Health*. They pointed out quite clearly that: "The United States today faces only one serious manpower shortage, and that is in health care personnel." They further commented: "This shortage can become even more acute as health insurance expands, leading to even more unmet needs and greater cost inflation, unless corrective action is taken now." I find it hard to believe that the State of Missouri, faced with the same critical health personnel shortages which exist throughout the nation, can fail to continue to support the institution which has become the major supplier of graduating physicians for the State; the second major supplier of baccalaureate nurses; one of the major suppliers of allied health personnel (325 enrolled) and of graduate students in health related programs (164 enrolled); and, certainly, the major single source of health care for the indigent of the State outside of St. Louis and Kansas City. However, this is a real possibility unless the State finds a source for adequate revenues both for operations and critical capital needs.



Dean Mayer

I feel that the words with which I closed the April, 1970 article in *MISSOURI MEDICINE* are even more appropriate now than they were a year ago: "One obviously could cite numerous other equally critical examples of needs within the University structure, or the Division of Mental Diseases, or the Division of Welfare, or secondary education.

"I feel that it is vitally important that the people of Missouri realize at least some of the implications of the critically needed services which will not be met if the revenues of the State have reached their plateau. I am not a politician, and do not pretend to be one, but I do have a responsibility for one of the resources of the State and can see what may be lost in health educational and health care advances if we continue on the course proposed by some.

"Frankly, I am concerned. I hope that some of you may be concerned as well, and will share those concerns with others."



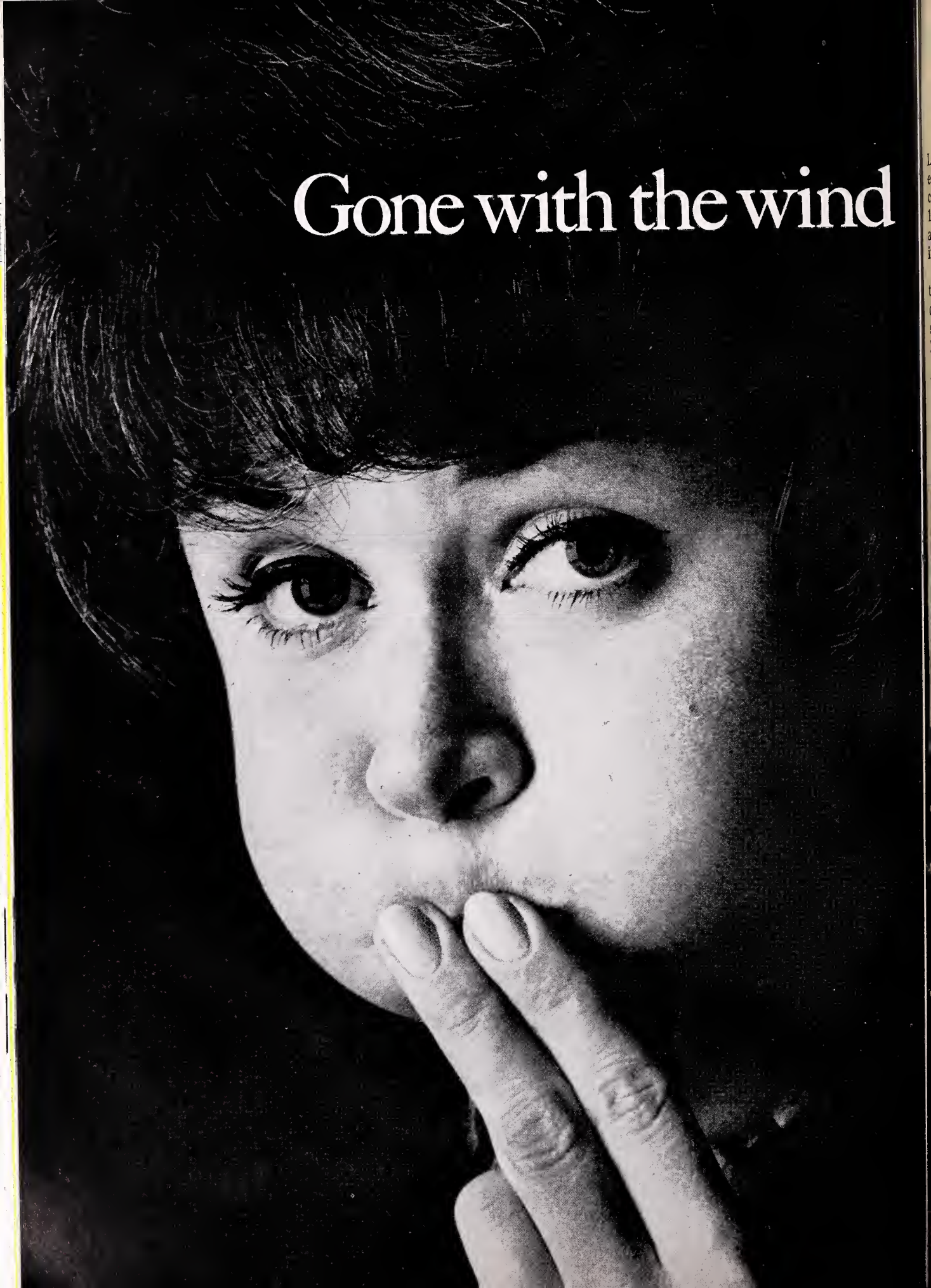
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Gone with the wind



Dr. Gunn Is MSMA President-Elect

Walter T. Gunn, M.D., St. Louis, was named president-elect of the Missouri State Medical Association, on Sunday, April 18, at the organization's 113th annual meeting at the Hotel Chase in St. Louis.

Dr. Gunn, a general practitioner, will take office as president of the association next year, succeeding Gerald L. Miller, M.D., Kansas City, who was installed as president at the annual banquet on April 17.

Dr. Gunn was born in Waterloo, Iowa, but when he was two years of age, the family moved to St. Louis. He is a graduate of the St. Louis University School of Medicine.

The new president-elect of the Missouri State Medical Association, served three and one-half years in the Army Medical Corps in World War II and commanded the 630th Medical Clearing Company.

Dr. Gunn has been president of the St. Louis Medical Society and has been treasurer and chairman of the Council of the State Medical Association. He is also a past president of both the St. Louis and the Missouri Academy of General Practice. He has served as president of the General Practice Section of the Southern Medical Association.

A past lieutenant-governor of Kiwanis, Division VII, Dr. Gunn is Post Surgeon of the Lester Schleuter Post 300, American Legion, a member of the VFW and a fourth degree Knight of Columbus.

Elected along with Dr. Gunn, by the MSMA House of Delegates, were vice presidents W. W. Gist, M.D., Kansas City; Raymond Rit-



Walter T. Gunn, M.D.

ter, M.D., Cape Girardeau; and Joseph L. Johnston, M.D., Springfield. Hector W. Benoit, M.D., Kansas City; and Arthur W. Neil-

son, M.D., St. Louis; were re-elected as delegates to the American Medical Association, with Hugh Stephenson, M.D., Columbia; and Robert W. Kelley, M.D., St. Louis; re-elected as alternates. Elvin D. Imes, M.D., Maryville; was re-elected speaker of the House and Robert A. Slickman, M.D., Kansas City; was re-elected as vice speaker.

Re-elected to the Council, by the physician delegates from their districts, were Lysle M. Bach, M.D., Hannibal, Second District; William D. Bradshaw, M.D., Clinton, Sixth District; Howard J. McAlhany, M.D., Springfield, Eighth District; and Eugene T. Hansbrough, M.D., Poplar Bluff, Tenth District.

Much Work Remains For Missouri's General Assembly

The Missouri General Assembly moved into the final eight weeks of its 1971 session, on April 19, with a great deal of work remaining. The Assembly is to adjourn on June 15.

Still in doubt is the fate of bills which have not been passed or killed during this session. The State Senate has announced plans to table all bills, but House leaders have discussed the possibility that the Speaker might be granted the power to decide which bills to keep alive for next year's session.

The following is a summary of legislation of interest to the health profession as of April 19:

Senate Bill 7, which provides that transactions involving transfusions of blood and the transplantation of organs are a service, has had a hearing in the House Public Health Committee and awaits committee action. The same is true for Senate Bill 9, which would require those applying for membership on a county hospital staff to provide written information concerning training and qualifications and accept the board as governing body of the

hospital. The professional staff of the hospital would have charge of professional activities.

House Bill 301, similar to Senate Bill 9, has passed the House and awaits a hearing in the Senate Public Health Committee.

House Committee Substitute for House Bill 79 is approximately 75 bills down on the House Perfection calendar. The bill would broaden the chiropractic practice act. The original bill would have allowed chiropractors to examine and treat the entire body, using any diagnostic devices; dispense vitamins and mineral supplements; and do physiotherapy, including the use of light, heat, sound, water, cold and exercise. The substitute still allows chiropractors to use physiotherapy and removes the "by hand" qualification for chiropractic examination. MSMA continues to oppose any extension of the chiropractic act and opposes House Bill 79 in any form, as do licensed professional physical therapists, the Missouri Association of Osteopathic Physicians
(Continued on back of page)

MSMA News

113TH SESSION BUSY ONE FOR MSMA DELEGATES

The House of Delegates, of the Missouri State Medical Association, considered 37 resolutions, reports of the Council, officers, commissions and committees during the four-day long, 113th Annual Session, April 15-18, at the Hotel Chase in St. Louis.

The House approved the annual report of the Health Care Foundation of Missouri and the statewide Peer Review Program; and turned down six resolutions which urged either rejection, postponement or actual denunciation of the Foundation and its program. The annual report is published in this, the May edition of **Missouri Medicine**, starting on Page 293.

Two resolutions, supporting the Foundation and its efforts, were approved by the House. The resolves of Resolution 9, read: "That the House of Delegates, of the Missouri State Medical Association, commend the Council for planning and establishing the Health Care Foundation of Missouri and the House herewith certifies its unqualified endorsement of the Health Care Foundation of Missouri and urges all members of the Missouri State Medical Association to give their support and cooperation to the Foundation."

The resolve in resolution 18, reads: "That the delegates of the Missouri State Medical Association go on record as endorsing and supporting the implementation of the Peer Review Program, as set up within the Health Care Foundation of Missouri."

Delegates voted to continue the \$10 yearly assessment on active members and \$5 on junior members to support the efforts of the Missouri State Medical Foundation, which makes loans to Missourians attending medical schools. This assessment will now be continued through 1974.

The House also condemned third party carriers, which make a common practice of notifying the insured that the physician's

fee was beyond the usual and customary fee for such a service; and called for informing all carriers that appropriate fee review mechanisms have been established and that problems in this area should be handled through these panels.

Among other actions, the House called for the setting up of a pilot program in the medical examiner field, a program which could be operated with limited financing; reaffirmed support for legislation to change the blood alcohol definition of intoxication to 0.10 grams per 100 milliliters of blood, from the present 0.15 grams; called for the acceptance of alcoholism as a medical problem; rejected a bid to urge a

statewide referendum to allow the people to decide whether to amend the Constitution of Missouri to include a "right to life" statement; and voted to make all past presidents of the Association, delegates at large to the House of Delegates.

The House rejected an effort to amend the MSMA Constitution to set up a referendum procedure. Laid on the table for a year was an amendment to the Association by-laws, which would change the wording of the "Junior Member" definition and exempt such members from paying dues. The House suggested the investigation of the establishment of a student membership classification.

General Assembly (Continued) — and Surgeons and some chiropractors.

A hearing was scheduled for April 20, in the Senate Judiciary Committee, for House Bill 73, which permits minors to receive medical treatment without parental consent, in cases involving venereal disease, drug abuse and pregnancy.

House Bill 116, which permits minors, 18 - 21 years of age, to donate blood without parental consent, has passed both Houses and been sent to the Governor for his signature.

House Bill 238, which reduces the alcohol level in the blood to indicate whether a driver is intoxicated, is far down on the House Perfection calendar.

House Bill 785, a broad consent for medical procedures law, is also on the House Perfection calendar, with many bills ahead of it.

House Bill 95, which would change the statute of limitations in malpractice cases, has been perfected by the House and is on the third reading calendar. The substitute, as perfected by the House, would have the effect of giving Missouri a five-year statute.

Senate Bill 332, which would

set up a statewide system of medical examiners, has had a hearing in the Senate Public Health Committee. No committee action appears likely, due to the cost factor.

Hearings have been held on House Joint Resolution 39, right to life amendment to the Missouri Constitution, and on House Bill 650, which would liberalize Missouri's abortion law. Both measures are still in separate committees.

House Bill 274, which would provide state aid for students in private medical and osteopathic schools, has been perfected by the House but is in the House Economics Committee, due to the large fiscal note.

DR STUART ELECTED -

Byron M. Stuart, M.D., Boonville, was elected President of the Missouri State Medical Foundation, at a meeting Friday, April 16, at the Chase Hotel, St. Louis. Dr. Stuart succeeded Paul R. Whitener, M.D., St. Louis, as President.

Max S. Franklin, M.D., St. Louis, was elected Vice-President of the Foundation. Charles R. Doyle, M.D., St. Louis, was re-elected Secretary-Treasurer of the Foundation.

HECTOR W. BENOIT, JR., M.D., *Kansas City*
Chairman

Health Care Foundation of Missouri

Annual Report—1971

As the result of action taken by the House of Delegates of the Missouri State Medical Association meeting in Annual Session in Kansas City in April, 1970 wherein the Council of the Missouri State Medical Association was directed to implement a mechanism of peer review throughout the state, and as the result of action taken in August, 1970 by the Board of Trustees of the Missouri Association of Osteopathic Physicians and Surgeons after consultation with the Missouri State Medical Association, a charter was drafted, filed and approved by the Secretary of State of Missouri creating a not-for-profit corporation called The Health Care Foundation of Missouri. This charter was granted in August, 1970.

The purpose of this Foundation is stated in the By-Laws, Chapter I, Section 1, and I quote: "The business of this corporation will concern itself with the State-Wide Peer Review mechanism for health care of the State and the regulation of same, the accumulation and utilization of information gathered from this peer review effort, for the education of the public and of the physicians of the State of Missouri, and negotiation, mediation and discipline as may be appropriate."

The By-Laws call for an organizational structure with two classes of membership: Administrative and Participating. Administrative members are those voting members of the Missouri State Medical Association Council and members of the Board of Trustees of the Missouri Association of Osteopathic Physicians and Surgeons. The Participating members are all other accredited members of the Missouri State Medical Association and the Missouri Association of Osteopathic Physicians and Surgeons.

The Administrative members elected a Board of Directors to serve as the overall governing and policy-making body of the Foundation. This Board consists of nine members, six M.D.'s and three D.O.'s. The first Board of Directors was elected in October, 1970 as follows:

1. Hector W. Benoit, Jr., M.D., Kansas City, three years (Chairman)

This first annual report of the Health Care Foundation of Missouri was delivered to the House of Delegates by Chairman Hector W. Benoit, Jr. during the 113th Annual Session of the Missouri State Medical Association on April 15-18, 1971.

2. Richard A. Michael, D.O., Jefferson City, three years (Vice Chairman)
3. Gerald L. Miller, M.D., Kansas City, three years
4. Eugene W. Egle, D.O., St. Charles, two years
5. Joseph L. Fisher, M.D., St. Joseph, two years
6. Rae W. Froelich, M.D., Lebanon, two years
7. Charles R. Gulick, M.D., St. Louis, one year
8. Claus A. Rohweder, D.O., Kirksville, one year
9. John I. Matthews, M.D., Jefferson City, one year.

This Board will serve until the end of the calendar year 1971. At this 1971 Annual Session, members will be elected to fill the expiring one-year terms on the Board, with incumbents eligible for reelection, and such election and all subsequent elections will be for three-year terms. At all times, there will be at least two Medical Doctors and one Doctor of Osteopathy on the Board who are Participating members of the Foundation. After 1971, all officers will be elected by the Board for one-year terms.

The Board of Directors has met three times since its creation. The first meeting was in December, 1970, which was mostly an organizational meeting. Some of the activities indulged in by the Board at that time included the creation of standing committees as called for in the By-Laws, such as the By-Laws Committee, the Budget Committee, Nominating Committee and Personnel Committee. All of these committees have been exceedingly active since they have been created.

The second meeting of the Board was held

in January, 1971, at which time preliminary reports from the Budget Committee and By-Laws Committee were received, discussed and approved. Further direction to the Nominating Committee and the Personnel Committee was given. A preliminary report by the Chairman of the Board was given to the Missouri State Medical Association Council which was meeting in conjoint session at that same time.

It is the Board's primary responsibility to conduct the general business affairs of the corporation in addition to receiving reports from and advising actions for the peer review mechanism and its committees, which will be discussed later in this report. Appropriate office space, secretarial personnel, telephone, stationery and other business items have been secured. Proper liability, Workmen's Compensation and travel insurance have all been purchased. Legal counsel has been retained. The initial hiring of staff has been started.

At the top of the peer review mechanism stands the Central Coordinating Committee directly responsible to the Board. This Central Coordinating Committee will coordinate the activities of the Area Panel Review Committees. The Central Coordinating Committee consists of nine members, six M.D.'s and three D.O.'s, not selected to represent given specialties in medicine, but rather for their known stature and prudence and geographical representation throughout the state. These members will serve for two years and are eligible for reappointment. They are:

1. Rae W. Froelich, M.D., Lebanon (Chairman)
2. Robert E. Bregant, M.D., Jefferson City
3. Joseph C. Peden, Jr., M.D., St. Louis
4. James N. Haddock, M.D., St. Louis
5. Francis M. Maple, M.D., Springfield
6. Leonard A. Wall, M.D., Kansas City
7. Harold E. George, D.O., Mt. Vernon
8. Phillip L. Accardo, D.O., Independence
9. William E. Button, D.O., St. Louis.

The Central Coordinating Committee will observe operations of the Panel Review Committees and receive regular reports from the Panel Review Committees. They will report both individually and collectively to their Chairman at their regularly scheduled meetings, and, in turn, the Chairman will report to the Board not only as to activities of the peer review mechanism, but also will offer suggestions and recommendations for change in the operation of the peer review function to the Board of Directors for their consideration. Furthermore, the Central Coordinating Committee will receive reports from

each of the Panel Review Committees, which may be complemented or supplemented by reports from the Specialty Review Committees when indicated. It is anticipated that the Central Coordinating Committee will meet quarterly or more often if necessary.

The State of Missouri has been divided into five Panel Areas for purposes of regional review. Each of these Panel Areas is served by a Panel Review Committee. Each such Committee consists of seven Active Members, five M.D.'s and two D.O.'s. There are seven Alternate Members, again five M.D.'s and two D.O.'s, so as to assure adequate attendance at all meetings of the Committee. Each Committee will meet on the call of the Chairman as sufficient material for their consideration becomes available. It is anticipated that when these Committees are functioning properly, they will meet once a month. Each Committee will have proper staff support to assure that all material referred to the Committee has been adequately screened and documented to permit efficient review.

There has been appointed by each of the numerous specialty societies across the state one Consultant to each Panel Review Committee from each specialty organization. Each of the five Area Consultants in any one specialty are members of the Statewide Specialty Review Committee in that specialty. They are available to all of the Panels for special consultation and on individual cases when needed. The actions of the Panel Review Committees and those of the Specialty Review Committees, when utilized, are forwarded in regular reports to the Central Coordinating Committee for final action.

The sources of material for the Health Care Foundation to process are five in number: physicians; patients; third party carriers, both private and governmental; institutions, such as extended care facilities; nursing homes and hospitals; and management and labor organizations.

There is one more committee provided for in the By-Laws of the Foundation known as the Judicial Committee. This Committee has at this point in time not yet been elected, but will be at this Annual Session of the MSMA and the MAOPS being held at the same time in different locales. This Committee will consist of nine members, again six of them M.D.'s and three of them D.O.'s. The Nominating Committee has been instructed to select names for presentation to the Administrative members for election who are well recognized in their communities as outstanding practitioners, mature, well-respected individuals and above reproach. In addition, on the Judicial Committee, there will be two ex-officio members, one an M.D. and one a D.O.,

both of whom will be members of the State Board of Registration for the Healing Arts.

The flow of material through the Health Care Foundation will be as follows: All complaints generated by the existence of the Health Care Foundation will be referred to the central office in Jefferson City, where they will be screened by staff for validity and completeness. If decisions are required by staff relative to the acceptability of the material for peer review, the decision will be made by the Board. Having cleared the material for processing, it will be referred to the appropriate Panel Review Committee for its next meeting. Prior to that time, all of the documentary evidence necessary to make for an efficient review will be made available by staff. The Panel Review Committee may elect to render a decision on the basis of the information available and will report it to the party involved as well as the Central Coordinating Committee. If because of the inherent makeup of the Panel Review Committee certain expertise is lacking in the management of a certain problem, the Consultant to that Panel Review Committee in the specialty involved will be contacted. If he in turn feels that the material is something about which he does not wish to render a solo opinion, he then will refer it by mail or telephone conference to the other members of that Specialty Review Committee across the state, wherein a decision will be determined. The report of the Specialty Review Committee will then be forwarded to the involved Panel Review Committee and to the Central Coordinating Committee for their final perusal and action. The Central Coordinating Committee, with the backing of the Board of Directors, will render a report to the aggrieved party and indicate to that party what the decision may be and, also, willingness to support it if necessary with expert testimony in court. In the event that a physician appears to be in serious difficulty from the point of view of ethics, mode of practice, a sense of fiscal irresponsibility or whatever, he will then be contacted by the appropriate members of the Central Coordinating Committee with the backing of the Board, and the error of his ways will be outlined to him. This will be in the nature of an educational process and warning. If repeated evidence of poor practice, excessive charging or lack of appropriate medical ethics occurs in the same individual,

his ease will then be presented to the Judicial Committee for action. The presence of the two members of the State Board of Registration for the Healing Arts in an ex-officio capacity gives us access to and liaison with the state agency which controls the licensure of physicians. Recommendations of the Judicial Committee will be forwarded to that body for their consideration and to the appropriate State Association, either medical or osteopathic.

It should be emphasized that the philosophy of the peer review program, as established by the conjoint efforts of the Missouri State Medical Association and the Missouri Association of Osteopathic Physicians and Surgeons and now being carried on by the Board of Directors of the Health Care Foundation, is primarily one of attempting to control costs of medical and health care, to upgrade the quality of medical and health care, to identify and correct educational needs both of the profession and of the public, including insurance carriers, and hopefully to a very minimal extent, to indulge in punitive action against members of the professions if evidence exists to warrant such action. It is anticipated that there will be a better utilization of hospital and office facilities as the result of this ongoing peer review mechanism. It is anticipated that hospitalization review committees will receive added moral support in carrying out their tasks on a day-by-day basis when such support is needed from an outside agency with the authority possessed by the Health Care Foundation.

It should be stated for the record that the Health Care Foundation's initial funding came from financial support from the Missouri State Medical Association, the Missouri Association of Osteopathic Physicians and Surgeons, the Kansas City Blue Shield Plan and the Missouri Medical Service in St. Louis. It is hoped that by intelligent management, the corporation itself will generate enough income to cover its additional expenses as the program develops. The strong support of all facets of the population is needed to make this very critical peer review mechanism function in the public interest. Insurance companies, governmental carriers, physicians, hospitals and most of all the patients must be given the message and understand what we are trying to do in this complex field of cost and quality control of health care.

New Developments in Continuing Medical Education

Nearly 20,000 M.D.s have been honored by the American Medical Association for participation in continuing medical education programs.

The Physician's Recognition Award, established in 1969, has now been given to 19,338 M.D.s. Qualifiers include 11,304 physicians who were in residency training when they applied and 8,304 doctors engaged in full-time patient care.

The Award is given for a minimum of 150 credit hours of continuing medical education earned over a continuous three-year qualifying period. At least 60 credit hours must come from any combination of required education categories.

The current listing of continuing education

courses for physicians includes 2,319 courses offered by 611 institutions in 41 states, the District of Columbia and Puerto Rico, a 15% increase in the number of courses offered last year. These courses are listed annually in the AMA Journal.

Ninety medical institutions and organizations have been formally accredited for continuing medical education by the AMA Council on Medical Education. Eventually, after all institutions have been offered the opportunity of survey for accreditation, the annual course listing will include only courses at accredited institutions.

The AMA Award, other voluntary continuing education programs and programs that would require of physicians evidence of continuing medical education for continuance of professional privileges and for recertification and relicensure were reviewed at the Second National Conference of State Medical Association Representatives on Continuing Medical Education. The conference was sponsored by AMA.

C. John Tupper, M.D., Dean of the University of California, Davis, School of Medicine, speaking at the conference, noted that "one never graduates in medicine; one never achieves a level." He spoke out against relicensure or the renewal of licenses by examination through governmental agencies, declaring it would be "wasteful and ineffective."

"Rather, I believe that we must demonstrate to those responsible agencies that there is a successful and effective voluntary way for assuring the continuing competence of the physician through efforts on his own behalf to continually upgrade and update his fund of knowledge, his skills and the manner in which he uses them."

James Z. Appel, M.D., member of AMA's Committee on Continuing Medical Education, reminded his colleagues at the conference: "Were we not repeatedly told when we were medical school students that 'medicine is a lifetime of learning'? During our internship and residency, were we not warned how quickly we could become obsolete if we did not constantly keep up? Should not the stimulation induced by high moral motivation create a dedication to

MSMA and Continuing Medical Education

Early in 1970, an Ad Hoc Committee on Continuing Medical Education for 1970-1971 was appointed by Dr. J. F. McDonnell, Chairman of the MSMA Commission on Continuing Education and Health Manpower.

Dr. Paul R. Young is Chairman of the Ad Hoc Committee. Members are Drs. George H. Ladyman, W. Wayne Boydston, Arnold Block, E. James Potchen, A. Sherwood Baker, Ralph R. Hall and Robert S. Mosser.

The Ad Hoc Committee on Continuing Medical Education has studied the subject of voluntary or required continuing medical education and submitted plans and recommendations for implementation to the MSMA Council and House of Delegates during the 113th Annual Session of the Missouri State Medical Association on April 15-18 in St. Louis.

Since MISSOURI MEDICINE was published before that meeting, the decisions of the House of Delegates will be reported in a subsequent issue of this Journal.

perfectionism that would make continuing education an integral part of the practice of medicine?"

Recent continuing education activities in state and specialty medical societies include:

—The Oregon Medical Association is implementing a plan to require periodic documentation by society members of participation in continuing education as a condition for continued membership.

—The Pennsylvania Medical Society will require members to achieve the requirements of the AMA Physician's Recognition Award to retain membership, after July, 1972.

—The New Mexico Medical Society is suggesting legislation to require participation in continuing education programs for re-registration by the Board of Medical Examiners. The recommendations for legislation, approved by that Society's House of Delegates in November, calls for proof of participation in continuing education every five years.

—The California Medical Association began a voluntary program last August to "collect, codify and certify physician participation in accredited postgraduate education" by order of a resolution adopted earlier. More than 100 hospitals in California currently require each staff physician to report continuing education experience on a yearly basis as a requirement for staff reappointment.

—The American Academy of General Practice, soon to be called the American Academy of Family Physicians, is the only specialty society requiring continuing medical education. At least 150 hours of approved continuing education every three years is a condition for continued membership.

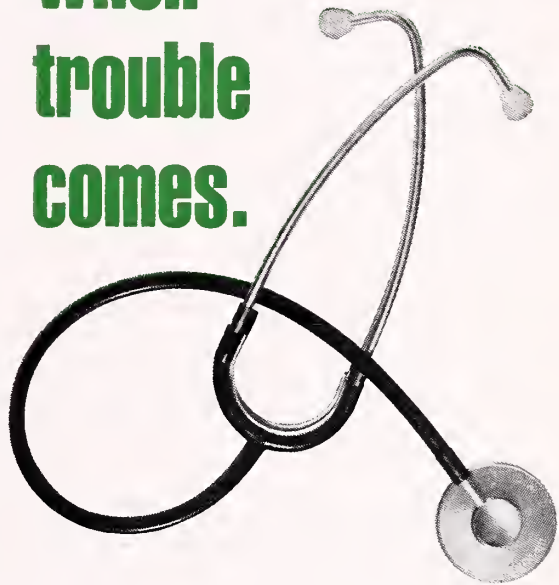
—The American College of Physicians' second medical knowledge self-assessment program, which covers various aspects of internal medicine, will be available during the early part of the year.

—A surgical knowledge self-assessment program, focusing on surgery in general and designed for the surgeon who has been practicing ten years, is being readied by the American College of Surgeons for distribution this fall.

—The American Psychiatric Association is considering an award program that may be similar to the AMA's Physician's Recognition Award.

New ideas, methods, and programs in the field of continuing medical education are reported monthly in the *Continuing Medical Education Newsletter*, published by AMA's Department of Continuing Medical Education.

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**ELLIS FISCHER STATE CANCER HOSPITAL
and CANCER RESEARCH CENTER***Semiannual Professional Program***May 29, 1971****Ramada Inn, Columbia**

- 8:30 AM Registration (no fee)
- 9:00 AM *Welcome*, Reginald P. Pugh, M.D.
- 9:05 AM *Introduction*, Carlos Perez-Mesa, M.D.
- 9:10 AM *Leukoplakia of the Oral Cavity: A Clinical Entity*, Henry M. Cherrick, D.D.S., M.S.D.
- 9:40 AM *Radiographic Manifestations of Mandibular Lesions*, Charles Dunlap, D.D.S., M.S.D.
- 10:10 AM Coffee Break
- 10:25 AM *Oral Manifestations of Dermatological Conditions*, Philip C. Anderson, M.D.
- 11:00 AM *Oral Manifestations of Metabolic Disorders*, J. B. Whitten, D.D.S.
- 11:30 AM Questions
- 12:00 NOON Lunch, Ramada Inn. *Observations of a Neurotic*, Ronald E. Taven, M.S.
- 1:30 PM *Treating Advanced Carcinoma of the Oral Cavity With Local Chemotherapy Perfusion*, William Donegan, M.D.
- 2:00 PM *Tumors of the Salivary Gland*, Lauren V. Ackerman, M.D.
- 2:45 PM Questions
- 3:00 PM Coffee Break
- 3:15 PM *Seminar on Oral Lesions: Photoclinical Exercise*
Moderator: Dr. Ackerman
Panel:
Paul O. Boyle, D.D.S.; Dr. Anderson, Dr. Cherrick, Dr. Donegan, Dr. Dunlap, Dr. Whitten
- 4:15 PM Adjourn

Clinical characteristics of oral lesions will be emphasized with photographs and roentgenograms displayed near the registration desk. The seminar is planned to stimulate participation by the entire audience; paper and pencil will be provided for every individual to submit his diagnosis. Each case will be discussed by its contributor. Histopathology will be of a low profile.

The EFSCH-CRC Professional Program is open to any interested physician or dentist. For more information, write to Carlos Perez-Mesa, M.D., Ellis Fischel State Cancer Hospital, Business 70 and Garth Ave., Columbia, Mo. 65201.

This conference is sponsored in part by the John J. Modlin Memorial Lecture Fund established at the Cancer Research Center.

IMPROVED ACCIDENT & HEALTH PROGRAMS

The Disability Income Policy sponsored by the Missouri State Medical Association since 1943 has now been made **GUARANTEED RENEWABLE** and income benefits are available up to \$300.00 weekly to members under age 56 subject to acceptance by the Company.

Also, the Major Hospital and Nurse Expense Program offers higher limits with increased Room & Board Benefits.

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Notes of interest from Here

. . . .

and There

Dr. Peter W. Kinsella, St. Louis, will serve as president of the Missouri Chapter of the American Thoracic Society for the coming year. Doctor Kinsella is on the Board of Directors of the Tuberculosis and Respiratory Disease Society of St. Louis and Eastern Missouri and also serves as a member of the Society's Sub-Committee on Emphysema. Other officers elected at the annual meeting of the Missouri Chapter are **Dr. Arnulfo Sulit**, vice-president, and **Dr. Charles S. Christianson**, secretary-treasurer. Doctor Sulit is Chief of Pulmonary Diseases at Kansas City General Hospital and Doctor Christianson is Chief of the Department of Medicine of the Missouri State Sanatorium in Mount Vernon.

Dr. R. N. Crews of Fulton, who is 99 years old, was honored on Doctor's Day by the Woman's Auxiliary to the Callaway County Medical Society. **Mrs. James K. Ritterbusch** and **Mrs. Richard A. Osbourn** presented a red carnation to Doctor Crews who will be 100 years old on September 11. Doctor Crews retired last year after 75 years of practice and now lives with his son and daughter-in-law, **Dr. and Mrs. Carroll Crews**.

Dr. C. Stuart Exon, Jefferson City, will serve as a medical missionary in Chengmai, Thailand during May and June. A service of recognition and commissioning for missionary service was held at the First United Methodist Church under the auspices of the United Presbyterian Church of the U. S. A. on April 18. Mrs. Exon and their daughter, Ellen, will accompany Doctor Exon.

Dr. Leslie Wise, associate professor of surgery at Washington University School of Medicine in St. Louis, has been appointed as a Hunterian Professor of the Royal College of Surgeons, England. His appointment followed a lecture he gave in London recently before the Royal College of Surgeons.

Dr. Robert Buben has been named chief of the Department of Surgery at St. Elizabeth's Hospital in Hannibal. He succeeds **Dr. B. L. Murphy**, who has retired. Doctor Buben is a native of St. Louis and has been associated with **Dr. Merrill J. Roller** and **Dr. Thomas Fischer** in Hannibal for the past seven months.

Dr. Sergio Cruz has joined the staff at St. Vincent's hospital in Monett as cardiologist and internist. Dr. Cruz has been on the staff at Lutheran Hospital in St. Louis since 1970.

PMA Challenges Product List Issued by FDA

Two-thirds of the products made by its member companies that were included in a recent list of so-called "ineffective drugs" issued by the U. S. Food and Drug Administration are already off the market, the Pharmaceutical Manufacturers Association has announced.

President C. Joseph Stetler made public an analysis of the list of 359 products distributed by the FDA to federal agencies and to the mass communications media.

The list contained prescription and nonprescription drugs and such assorted other products as tooth pastes and mouth washes, all deemed by the FDA to be lacking "substantial evidence of effectiveness" or having "an unfavorable benefit to risk ratio."

Representing regulatory actions published by the FDA in the Federal Register for the period from January, 1968 to the end of 1970, the list has received wide publicity.

"This publicity has had the effect of giving the public the erroneous impression that a new, large-scale action, based on incontrovertible scientific evidence, is being taken against hundreds of products still in use," Stetler said.

The FDA list was based on an evaluation for effectiveness of drug products by the National Academy of Sciences-National Research Council. The list in some cases represented varied

dosage forms and package sizes for the same drug, which reduces considerably the total of 359 items, the PMA noted.

The PMA analysis showed of the 359 items listed, 292 were manufactured by its member companies. Three of the products made by PMA members were never marketed in the United States. Another 25 ceased to be marketed before January, 1968, some as long as 20 years ago.

Eliminating these nonavailable items, a total of 172 products on the FDA list were removed from the market over the past three years. Ninety-two remain on the market.

In the latter category, in virtually all instances the manufacturer is responding to FDA requests to make available more data to demonstrate effectiveness, Stetler said. Some labeling and formulation changes have been and are being made. A few products have become the subject of regulatory or judicial redress.

"We are confident that a great many of these products, which have been used successfully by doctors for many years, will remain in use," Stetler said.

The analysis showed that four products rated "effective" by the NAS/NRC showed up on the FDA's ineffective list. Forty-three products rated "effective, but," five found "probably effective," and 22 deemed "possibly effective" were placed by the FDA in the same category.

Stetler pointed out that of the group of 292 PMA company products, 59 received an "ineffective" rating by the NAS/NRC and another 159 involved the concept of "ineffective as a fixed combination."

A considerable scientific debate is underway over the entire fixed combination question, with expert opinion on both sides of the issue.

"The way the FDA has translated the often qualified NAS/NCR findings into summary regulatory action against individual products remains the most controversial aspect of the review process," Stetler declared.

Many contested drugs have been voluntarily withdrawn from the market by manufacturers because the required lengthy clinical trials and studies are not feasible, in part because of a shortage of qualified investigators.

While the PMA did not survey non-PMA member companies producing 67 products on the FDA list, a breakdown would probably be similar to that for PMA companies, it was pointed out.

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An alternative to conventional therapy

Efudex (fluorouracil) offers the physician a topical alternative to cryosurgery, electrodesiccation and cold-knife surgery in the treatment of solar/actinic keratoses. It is effective, comparatively inexpensive and especially well suited for treatment of these multiple lesions. Important, too, is the highly desirable cosmetic result. Clinical experience demonstrates that treatment with Efudex results in an extremely low incidence of scarring.*

Highly effective

In clinical trials, depending on the dosage form and strength used, complete involution occurred in 77 to 88 per cent of lesions following treatment. The rate of recurrence was low, ranging from 1.7 to 5.6 per cent up to a year after completion of therapy. When new lesions appeared, repeated courses of Efudex therapy proved effective.*

Predictable therapeutic response

Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two or three months before gradually receding. Since this response is so predictable, lesions which do not respond should be biopsied.

Two strengths—two dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two important considerations: First, please consult the complete prescribing information for precautions, warnings

and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Efudex Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Efudex Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing-cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



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cream/solution

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



American Medical Association spokesmen urged that the AMA Mediredit national health insurance program be adopted as the best way to assure the nation's poor access to quality medical care and to free families with moderate incomes from the fear of bankruptcy resulting from a long, costly illness.

Dr. Max H. Parrott, chairman of the Board of Trustees, and Dr. Russell B. Roth, speaker of the House of Delegates, represented the AMA before the Senate Health subcommittee at one of its hearings on national health insurance and major health care problems facing the nation.

They estimated the first year cost of Mediredit at \$14.5 billion, much less than some proposals before Congress that would have the federal government virtually take over the nation's health care delivery.

The Mediredit legislation (H.R. 4960 and S. 987) has been introduced in Congress with 131 Democrats and Republican members as sponsors.

Doctor Roth said that Mediredit, "without disturbing the present Medicare program for the elderly . . . makes available to everyone under 65 a private program of comprehensive medical and health care protection, covering both the ordinary and the catastrophic expenses of illness or accident."

Doctor Parrott warned against legislating revolutionary changes in health care delivery. He urged that innovations be tried on an experimental scale instead.

"The American medical-health care system needs something more than a poultice, but something less than a burial," he said.

"The AMA believes we can bring about needed improvements without gambling on a whole new medical-health care system whose effects and effectiveness are unpredictable. . . . The American doctor is sincerely concerned over the prospect of any sudden, single, massive unevaluated experiment which would cast all 200 million Americans in the role of the guinea pig."

Doctor Parrott also testified that many health problems would respond best to programs that are not purely medical.

"Our fat standard of living creates health problems," he said. "We ride in cars when we should be on a bicycle or on foot. We overeat. We overdrink. We smoke cigarettes. This affluent life style relates directly to the accident rate, the principal killer up to middle age and to heart diseases, the principal killer after middle age."

Speaking as a practicing obstetrician, Doctor Parrott pointed out that infant mortality rates in this country are not entirely a medical problem. They are linked closely to malnutrition and other conditions of poverty, particularly in urban ghettos, he said.

"If we could create a broad program that would bring dignity into the lives of people in our slums, if we could create a world every mother wanted to bring her child into, that would do more to improve infant mortality than a hundred Mayo clinics," he said.

* * *

The chairman of the AMA's Council on Rural Health told the Senate Health Subcommittee that a variety of new health programs are needed to solve the problems of health care in rural communities.

The AMA spokesman, Leopold J. Snyder, M.D., Fresno, Calif., said some of the new programs already are being tried.

"Experience indicates that no one approach will solve the health needs of every community. Any attempt to find single causes for these health problems, or simple solutions to them, is bound to result in total frustration.

"While medical solutions are being sought, we believe that the root causes to these problems—largely socioeconomic in character—should be identified and resolved."

Doctor Snyder explained to the subcommittee that while large segments of people in rural communities have access to quality health care, there are still large segments which do not.

"In some instances," he said, "these people live in remote localities, far from the nearest health center. In other cases, their lack of adequate health service can be attributed to rea-

sons of economics, immobility, cultural attitudes and a host of other causes.

"Whatever the reason, the American Medical Association believes every person should have access to adequate health care, whether he lives in a city, or some remote rural region, regardless of his economic circumstances.

"Doctors are aware of the need for better health care in rural communities. Together with other groups and organizations, we are actively developing new approaches to the problems."

He said that the following are among the new programs under study by the AMA:

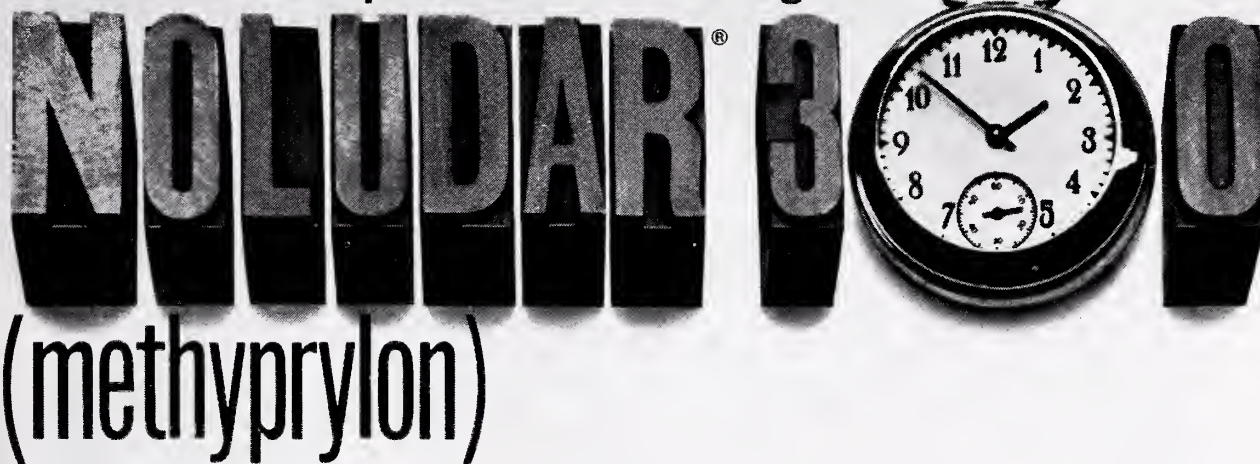
—In Seattle, the University of Washington is providing former medical corpsmen with a three-month refresher course on civilian medical procedures. Upon completion of the course, these former medics are sent to physicians across the state, who have agreed to act as their preceptors, and to employ them after 12 months of on-the-job experience. Some of these men are already on the job, mostly in rural communities. This Medex Program, as it is called is supported by the Washington State Medical Association and its Education and Research Foundation, as

well as the AMA's Council on Rural Health.

—In Lawrence County, Ala., another project also involves the services of former medical corpsmen. In this Appalachian area, there are only six physicians to serve a population of 30,000. Basically, the project has two modes of patient contact—a family care unit and "out-reach" teams. The out-reach teams introduce families to the community health service personnel, who can then begin the history-taking process and refer the family to the family care unit.

—In Southern Monterey County, Cal., a small population is increased to 23,000 by a seasonal influx of migrant farm workers. A group of ten physicians and 80 supporting ancillary staff members have undertaken to provide medical care to all eligible residents, including migrant farm workers. Patients are cared for in the same facilities by the same medical staff that serves the self-sustaining members of the community. Transportation—including a van, equipped for wheelchair patients—serves the entire project area. Grantee for the project is the Monterey County Medical Society with funds from the Office of Economic Opportunity.

For Insomnia...one capsule for the rest of the night



Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with

withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly in-

crease hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.



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JEROME D. PAUKER, Ph.D., *Columbia*

Research as an Integral Part of the Clinical Process

FROM TIME TO TIME, one hears or sees printed the rather weak statement that research and clinical practice "are not incompatible" or the more strongly stated point of view that research and clinical practice complement each other and are necessary for each other. In another and very real sense, clinical practice and experimental research fuse, are one and the same, when an individual patient is carefully and systematically observed under one set of circumstances and then serves as his own control when one of the circumstances is deliberately varied in some way while all other known conditions are held constant. The experimental research nature of the clinical process is very clear, for example, when the insulin dosage level of a patient is being adjusted or when a diet is systematically varied in order to determine the source of an allergy.

This paper describes the way in which an experimental research design and strategy were included as a vital part of the diagnostic procedure to provide valuable and pertinent information in the evaluation of the behavior of a child at the Multiple Handicap Clinic of the University of Missouri Medical Center.

THE SETTING

The Multiple Handicap Clinic is a diagnostic clinic for children who have more than one

handicap. The majority of the children are mentally retarded. The diagnostic process occurs over a period of three consecutive days during which the child is evaluated by members of a variety of medical and behavioral specialties. A case conference is held on the third day. Immediately following the conference, the child's parents are informed of the clinic's findings and recommendations.

THE CHILD

At the time he was seen in the Multiple Handicap Clinic, the boy was 11 years old. He was one of twins delivered approximately nine weeks prematurely and had a birth weight of 2 lb, 15 oz. At birth, he received oxygen to which is attributed his retrolentofibroplasia. His twin brother, also, is blind. The child appeared to be severely mentally retarded. He was described as being quite hyperactive, screaming and engaging in other disturbing activity which the family had not been able to control. His mother reported that his speech output consisted mostly of noises, but that he did use some words. These words were joined in phrases, such as "take me to the bathroom" and "let's eat." The boy used a combination of a few phrases, noises and gestures to make his wants known. The Clinic's speech pathologist, Patricia J. Goodding, Ph.D., described his general vocal output as follows:

Believing that the clear distinction often made between clinical and research endeavors is unfortunate, the author suggests that, whether or not one considers himself a researcher, the most appropriate clinical approach in a particular case may call for a solid research design. He illustrates his point with a specific evaluation experiment at the Multiple Handicap Clinic at the University of Missouri Medical Center. Doctor Pauker is an Associate Professor of Psychiatry and Psychology at the University.

A constant flow of sound came from (the patient), none of which was meaningful speech. Some recognizable words could be heard. These appeared to be words or phrases from songs and were emitted in the prosodic manner of the hillbilly song. Frequent piercing, high-pitched screams were heard, followed by an abrupt return to low, melodic chant.

The boy needed more or less constant care. He did not feed or dress himself, and he had to have assistance in going to the bathroom.

THE PARENTS

The patient's parents reported that they felt increasing tension as a result of the constant attention they had to pay to him because of his almost incessant stream of vocal noise. There were other problems in the family. The other children also presented a variety of medical and social problems. The father had recently had surgery performed because of a malignancy of the colon. The mother was under medical care for headaches, high blood pressure and dizzy spells. It was she, particularly, who was becoming almost frantic under the stress of the boy's constant noise and movement.

THE PROCEDURE

The usual procedure in psychological evaluation in the Multiple Handicap Clinic is for a psychology technician to administer a standard battery of psychological tests, the results of which are evaluated and reported by the Clinic psychologist. In the present case, the usual psychometric procedure could not be applied. Instead, because of the parents' complaints about the child's noises, the boy's behavior in that respect was systematically observed.

Each parent was observed with the child for three five-minute periods. The mother was asked first to enter a playroom with the child. She was told that they would be observed through a one-way mirror from an adjoining room. No further instructions were given. After five minutes, the situation was repeated with the father. Then the mother was recalled for her second five-minute period, again followed immediately by the father. The third five-minute segments will be described later, below.

During each five-minute period, a count was made of each vocal sound (or connected sound-sequence) made by the child and of each sound (or sequence) made by the parent. The totals are listed in Table 1. It can be seen that the

TABLE 1
NUMBER OF SOUNDS (OR CONNECTED SOUND-SEQUENCES) PRODUCED BY THE CHILD AND EACH OF HIS PARENTS DURING THREE FIVE-MINUTE PERIODS

	Boy With Mother PERIOD			Boy With Father PERIOD		
	1	2	3	1	2	3
Boy's vocal productions	41	79	18	32	29	59
Parent's vocal productions	20	77	0	16	3	59

child made about the same number of sounds during the first period with each parent (41 with the mother, 32 with the father), but that the number of sounds increased to 79 during the second period with the mother whereas with the father it remained about the same (29) as it had during the first period with him. It also can be seen that the mother and the father made about the same number of sounds during their first periods (20 and 16, respectively), but the mother increased in number of sounds to 77 during her second period whereas the number made by the father decreased to three.

What was seen to happen in the room was that every time the child made a noise, the mother would immediately respond by trying to quiet him and by trying to get him to play with something, accompanying these actions with phrases such as "be quiet" or "look at this" or "would you like to play with this?" or "isn't this nice?" During the mother's second period with the boy, this increased to what seemed like a frantic pitch.

The father, on the other hand, made little attempt to intervene with the child, his remarks were of shorter length and became even shorter and somewhat sarcastic and he ended up reading a newspaper he had brought with him into the room.

It appeared that the child's vocal behavior was reinforced by vocal behavior (or at least by attention) from the parents and that his vocal behavior was being *differentially* reinforced by the two parents. In other words, the hypothesis was raised that the parents' vocal attention following the child's vocal noises increased the possibility that the noises would recur and that the mother provided more reinforcement than did the father.

The third pair of five-minute periods, which immediately followed the father's second five-minute period, was used to test this hypothesis. The mother was asked again to go into the playroom with the child, but this time she was told to say nothing to the child and to do nothing with him. Then the father, during his third period with the child, was told to say something each time the child made a noise.

It can be seen in Table 1 that both parents followed instructions, the mother making no utterances at all during her third period with the boy and the father increasing his vocal productions to 59 (more than three times the total number he had made during the first two periods combined). It also can be seen that the hypothesis is confirmed: the child's previous vocal behavior with the two parents is now re-

versed, and he now makes many more sounds with the father (59) than with the mother (18).

USE OF DATA IN COUNSELLING THE PARENTS

The parents had pretty well decided to place their child in an institution for the retarded, and the general findings of the Clinic reinforced them in that decision. There remained the question of caring for the child until a place in the institution would become available. With the direct data about the interaction between the parents' and child's behavior, it was possible to demonstrate to the parents that the annoying and tension-producing aspects of their son's vocal behavior was really under their control and that they could make effective attempts to modify it if they so wished.

DISCUSSION

A clear (and unfortunate) distinction is often made *between* clinical and research endeavors, and medical students may assume that they have to know about research design and research methods *either* because they might some day wish to do "formal" research *or* because, as non-researching clinicians, they should be able to evaluate the research of others as it might apply to their clinical practice. An additional reason for being familiar with research processes is that, whether or not one considers himself a researcher, the most appropriate clinical approach in a particular case may call for a solid research design.

The American Geriatrics Society (AGS) honored a world-famous psychiatrist, two other medical scientists and a public health official for their contributions to the improvement of the diagnosis and treatment of diseases affecting the elderly at its 28th Annual Meeting on April 23-24 in Chicago. The awards and their recipients, as announced by Charles E. Lyght, M.D. of Oklawaha, Fla., president of the AGS, are The Edward Henderson Lecture Award to Alvan L. Barach, M.D., New York, N. Y., Consultant in Medicine at the Presbyterian Medical Center; The Malford W. Thewlis Award to Paul I. Robinson, M.D. of Montgomery, Ala., past-president of the AGS and Chief of the Professional Division, Medical Services Administration in the State of Alabama Department of Health; the Willard O. Thompson Award to Rachmiel Levine, M.D. of Duarte, Calif., Executive Medical Director of the City of Hope Medical Center; and The Edward B. Allen Award to Karl A. Menninger, M.D. of Topeka, Kan. and Chicago, Ill., Chairman of the Board of Trustees of the Menninger Foundation and of The Villages, Inc. of Topeka.

Wall-Defective Bacterial Variants and Disease

VARIATION IN BACTERIA has intrigued microbiologists for years. Of particular interest to the medical microbiologist are the morphologic variants and the role they play in the chronicity and recurrence of some infectious diseases. The morphologic variants that will be discussed here are the fragile, pleomorphic bacterial forms which lack a rigid cell wall similar to that of the parent bacteria from which they are derived and which are resistant to many of the commonly used antibiotics.

There are many types of cell wall-defective variants and considerable confusion exists concerning the differences between them, their origin and their relationship to each other and to the mycoplasmas. The wall-defective variants have been called "L-forms, protoplasts and spheroplasts." Although clear distinctions between these variants cannot always be made and such variants have been grouped together by some and called "L-phase variants," some discussion of the differences between these organisms is warranted if their resulting biological properties are to be understood and valid comparisons made with the parent organism.

Not to be discussed here will be the mycoplasmas which, although sharing many morphologic and colonial properties in common with the wall-defective variants, are not derived from a bacterial parent, as has been substantiated recently by nucleic acid studies.¹ Furthermore, whereas the etiology of the mycoplasmas in human disease is now known, the role of the wall-defective variants is still speculative.

For a proper appreciation of the many problems concerned with the wall-defective variants, one must understand the function of the cell wall in bacteria. This structure serves a vital mechanical role in protecting the cell from osmotic lysis, it confers specific shape on the cell and it plays an important part in normal cell division. It is now known that several antibiotics function by interfering with the biosynthesis of the cell wall at specific sites and, because of the differences in the chemical composition of the cell walls of gram-positive and gram-negative bacteria, antibiotics affect these two groups of microorganisms differently.

The first report of a wall-defective variant was in 1935 by Klieneberger, who isolated from a streptococcus, a fragile, pleomorphic organism which lacked a rigid cell wall and multiplied irregularly with the production of various-sized elements.² She called these organisms "L-forms" (the letter "L" stood for the Lister Institute where she was working). On suitable agar media, these organisms produce colonies whose dense core penetrates into the agar and usually produces a lighter superficial growth around the core, resulting in a typical "fried egg" appearance. With the discovery and use of penicillin, interest in L-forms was aroused because when exposed to this antibiotic, many bacteria produce forms resembling those isolated by Klieneberger and such organisms also are resistant to penicillin. Once an organism maintains these morphologic and colonial characteristics upon numerous subcultures and becomes stabilized, it can aptly be referred to as an "L-form" and it loses virtually all identity with the parent bacterium from which it was derived.

"Protoplasts" are osmotically fragile, spherical forms which resemble L-forms in morphologic and colonial properties. However, protoplasts are completely devoid of a cell wall and are unable to reproduce in the protoplast form. "Spheroplasts" resemble protoplasts except that they retain portions of their cell wall and are capable of limited division.³ In general, protoplasts are obtained from gram-positive species and spheroplasts from gram-negative species, and both types of morphologic variants usually revert to the normal bacterial form when the inducing agent is removed; however, either may undergo conversion to the classically stable L-form. For purposes of this discussion, L-forms, protoplasts and spheroplasts will be grouped under the term "wall-defective variants" and will be discussed together because of their many common properties. Reference to the specific type of wall-defective variant will not be made unless necessary.

In addition to penicillin, several other antibiotics whose site of action also is the biosynthesis of the bacterial cell wall are capable of producing wall-defective variants *in vitro*.⁴ These anti-

biotics include bacitracin, novobiocin, vancomycin, ristocetin, the cephalosporins and cycloserine. Also, many of the factors normally antagonistic to bacterial invasion of the body appear to injure the bacterial cell wall and may be responsible for the formation of such variants *in vivo*. Antibody, together with complement, has been shown to promote the production of wall-defective variants *in vivo*.⁵ During certain infections and in response to certain antigens, the tissue, blood and urinary lysozyme concentrations may rise to levels above those sufficient to produce variants *in vitro*.^{6, 7} Nonspecific host tissue factors such as amino acids or lysozyme, acting alone or synergistically with other enzymes or antibiotics, have been used to produce wall-defective variants *in vitro*.^{8, 9} Bacterial enzymes and bacteriophages also have produced variants *in vitro*.^{10, 11} There is, as yet, no evidence of the importance of these factors in producing variants in naturally occurring diseases. Antibiotics, however, are the agents most likely to be significant in producing wall-defective variants *in vivo* and it seems probable that most pathogenic bacteria can be induced to form such variants *in vivo* by those antibiotics most frequently used in clinical medicine.

CLINICAL SIGNIFICANCE

The role of wall-defective variants in infectious disease is one of the more important problems in current medical microbiology, and the persistence and recurrence of some bacterial infections despite adequate antibiotic therapy have been attributed in part to the production of such variants *in vivo*. These variants have been looked for in isolates from patients with certain disease states, and major interest has been directed toward their isolation from individuals with subacute bacterial endocarditis, acute rheumatic fever or fevers of undetermined origin.¹²⁻¹⁴ Isolations also have been described from urine, spinal fluid, tissue, sputum and pus.¹⁴⁻¹⁶ In general, when precautions for their isolation have been taken, they have been found, although the figures for their successful isolation will vary depending upon how well the patient population is chosen.¹⁶ Of all the locations in the body where wall-defective bacteria are likely to be present, the urinary tract provides the best environment because the osmotic pressure in the kidney and urine is more than enough to prevent lysis of such forms.¹⁵ In addition, urine also contains lysozyme, antibodies, antibiotics, glycine, bacteriophages and other

A description of the biological properties of bacterial variants with defective cell walls. The etiological role of wall defective variants in chronic and recurrent diseases is still speculative and has been impeded by lack of a special means to isolate them from clinical material and to identify them. It is the hope of the author that clinicians will initiate programs for isolating these variants from patients with these diseases and provide needed information for their management. Doctor Parisi is Associate Professor, Department of Microbiology, University of Missouri School of Medicine.

agents that can weaken the cell wall and promote the development of wall-defective variants.

The demonstration of wall-defective variants in urine might account for the tendency of urinary tract infections to recur after antibiotic treatment or after spontaneous recovery, and such recurrences could be explained by the reversion of wall-defective variants to the bacterial form.¹⁷ Reports of the persistence of wall-defective variants in blood indicate that although such variants require a hypertonic environment, they may survive *in vivo* in sites other than those with an increased osmolarity.¹⁸ Wall-defective variants have been isolated consistently from individuals with recurrent aphthous stomatitis, and their isolation from a patient with Whipple's disease is documented.^{16, 19} The persistence of wall-defective variants *in vivo* may actually be favored by their cell wall deficiency since it can account for their resistance to certain antimicrobial agents, especially those which attack the bacterial cell wall, and it may account for their decrease in susceptibility to ingestion and intracellular destruction by phagocytes.^{3, 20} The smaller size of these variants also could be responsible for their slower clearance by the reticuloendothelial system and give them a selective advantage for persistence.²¹ Although host defenses against wall-defective variants, no doubt, exist, their nature and mode of action are not clear.

To date, wall-defective variants have not been proven indisputably to be the etiologic agent in any specific disease state. The increasing number of reported isolations of these variants from chronic or relapsing disease states, however, raises many questions concerning their possible role in the persistence of such infections. The

relation of the wall-defective variant to the infection is often difficult to assess because frequently the normal bacterial form is isolated concomitantly with the variant. Progress in this area is impeded further by the difficulties experienced in the isolation and identification of wall-defective variants in the laboratory. The transition of a microorganism to a wall-defective variant usually is accompanied by marked changes in its requirements for cultivation. These changes are a direct result of the loss of the cell wall or portions of it, and this loss must be compensated for by more complicated methods for their isolation from clinical material. Serum must be added to supporting media, agar concentrations reduced and increased amounts of salt, sucrose or other substances for osmotic stabilization must be provided.

Furthermore, growth of wall-defective variants is very slow and usually cannot be seen macroscopically. Antibiotics, usually penicillin, are incorporated into isolation media to retard the growth of contaminants and to enhance the growth of the variants. As a result, clinical laboratories have not generally included the isolation of wall-defective variants into their routine isolation procedures. However, assuming successful isolation of such variants from clinical material, the identification procedures used routinely in the diagnostic laboratory cannot be applied to these variants. All stain gram negatively and, upon microscopic examination, provide no hint as to the bacterial parent from which it was derived. At present, identification rests on the ability to cause reversion of the wall-defective variant to its bacterial form and, then, identification of the reverted bacterium. Although L-forms cannot be identified precisely because of their stability, protoplasts and spheroplasts that have been compared with their respective bacterial parent have been found to retain many, but not all, of the enzymatic activities of the parent. Serologic identification, especially if based upon the presence of antigenic components associated with the cell wall, is inapplicable in the identification of L-forms and protoplasts, but may be of limited value in the identification of spheroplasts.²² A new approach to this problem, based on the differences in the nucleotide base composition of chromosomal deoxyribonucleic acid among different bacterial species has been useful, but the application of this molecular genetics technique cannot be employed routinely in the clinical laboratory.¹

Detailed *in vitro* assays comparing the antibiotic sensitivities of protoplasts and spheroplasts and their respective bacterial parent have been carried out with a limited number of species and have yielding varying results.³ It is difficult to compare the antibiotic sensitivity of a protoplast or spheroplast to that of its bacterial parent because of the marked difference in their respective growth rates. Deterioration of antibiotic and its diffusion, if the disc method is used, are important factors in these determinations. Although generalizations concerning these data are subject to numerous qualifications and exceptions, wall-defective variants are more resistant than their parent to penicillin, ampicillin, methicillin, oxacillin, cephalothin, cycloserine and bacitracin. On the other hand, these variants are more sensitive than their parent to the tetracyclines, erythromycin, chloramphenicol, lincomycin, oleandomycin and the nitrofurans. Depending on the species of organism, the variant may show either equal or greater sensitivity to ristocetin, novobiocin, kanamycin and streptomycin. Finally, sensitivity or resistance to neomycin, polymyxin B, colistin and vancomycin seems to vary from species to species of variant.

One of the most frequently used therapeutic approaches in infections suspected of being produced by wall-defective variants has been the administration of an antimicrobial, e.g., penicillin, that kills the bacterial form or enhances their conversion to variants by acting on the cell wall. This is then followed by one of the drugs, e.g., erythromycin or tetracycline, to which wall-defective variants are invariably sensitive because these drugs act by blocking metabolic pathways within the cell. Although apparent success with the sequential administration of antimicrobials in eradicating variants associated with certain chronic and recurrent infections has been demonstrated in small groups of patients and experimental animals, instances of failure of this regimen also have been reported.¹² Unfortunately, too little is known about the frequency of cases involving these variants, optimum methods for detection of such cases or the incidence of the deleterious effects of this therapeutic regimen. Thus, the use of sequential therapy in infections with these variant forms still should be considered in the realm of clinical investigation.

The demonstration of the pathogenicity of wall-defective variants has been difficult except in cases where the pathogenicity depends upon

the production of toxins or toxic products. When such variants are grown *in vitro*, they are capable of producing exotoxins and endotoxins, hemolysins, coagulase and other enzymes believed to be important in virulence.⁴ Recently, they have been shown capable of producing penicillinase.²³ When such variants are injected into laboratory animals, they are found to be pathogenic, but this is due usually to the later reversion *in vivo* to the pathogenic bacterial form. Some recent studies, however, may indicate that the variant forms inoculated into a site that allows their persistence may retain a low level of pathogenicity.¹³ In addition, it is known that wall-defective variants can participate in various experimental hypersensitivity phenomena since these variants produce antigens which may be associated with naturally occurring hypersensitivity diseases. However, the pathogenic qualities of wall-defective variants likely to be of greatest importance are their ability to maintain the residence of a pathogenic organism in a host during antibiotic therapy and their ability to revert to the pathogenic bacterial form when therapy is stopped.

SUMMARY

The isolation of wall-defective variants from certain chronic and recurrent infectious diseases suggests that these variants may play a role in their etiology. Also, when a patient does not respond to what is believed to be adequate antibiotic therapy based upon previous sensitivity testing of the presumed etiologic agent, wall-defective variants should be considered. Although there is no unequivocal proof that these variants can be pathogenic by themselves, there is no question that they can maintain the bacterial parent in the body in a form resistant to antibiotic therapy and then revert to the pathogenic bacterial form when therapy is ceased.

More information is needed on the incidence of wall-defective variants in patients with chronic and recurrent diseases. It is hoped that the clinician will initiate programs aimed at the iso-

lation of these variants from such patients and, as more is learned, provide the information needed for their management.

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Abstracts of papers for cardiovascular films and scientific exhibits to be presented at the American Heart Association's 44th annual Scientific Session must be postmarked by June 4, 1971. The meeting is scheduled for November 11-14 in Convention Center, Anaheim, Calif. Use official forms available from the Association's Department of Councils and International Program, 44 E. 23rd St., New York, N. Y. 10010.

Urological Aspects of Chylous Ascites

Case Report

CHYLOUS ASCITES is an uncommon complication of urological surgery and, specifically, has not been reported following lymphadenectomy for testicular tumor.¹ We report such a case in view of its instructive diagnostic features and to emphasize certain concepts in the management of this condition.

CASE REPORT

A 31-year-old man was admitted to the University Hospital on Oct. 28, 1968, one week following a right orchiectomy for an embryonal cell carcinoma of the testis. All preoperative studies, including lymphangiography, were normal. A transperitoneal, bilateral, retroperitoneal lymphadenectomy was performed on November 1. All nodes were free of tumor and a postoperative x-ray attested to the adequacy of the dissection (Fig. 1). He was discharged on the tenth postoperative day after an uneventful recovery. On December 5, he was readmitted with a history of enlarging abdominal girth, nausea and epigastric fullness. On examination, his weight was 192 lb. and his abdominal girth was 42 inches compared to his usual girth of 33 inches. There was appreciable muscle wasting. The abdominal findings of free intraperitoneal fluid were easily elicited. The routine hemogram showed slight lymphopenia; urinalysis and serum electrolytes were normal.

In an effort to relieve the epigastric discomfort,



Fig. 1 KUB film obtained following lymphadenectomy.

Although chylous ascites is an uncommon complication of urological surgery, the authors report a case following lymphadenectomy for testicular tumor. The report includes instructive diagnostic information and emphasizes certain concepts in the management of this condition, including a special dietary regimen. The authors are from the University of Missouri Medical Center where Doctor Ross is Associate Professor of Surgery (Urology), Doctor Terry is Assistant Professor of Surgery (General), Doctor Thompson is Professor of Surgery (Urology) and Mr. Beyer is Head Therapeutic Dietitian.

a 2,000 cc paracentesis was performed which produced fluid typical of chyle and contained many lymphocytes. Repeated examination of the chyle over the ensuing ten days showed a protein content ranging from 6.5-8.0 gm/100 cc, virtually all of which was albumin, and lipids which varied from 1,200-1,700 mg/100 cc. Concomitant serum protein levels were 5.2-7.4 mg/100 cc with a normal albumin-globulin ratio and a lipid content of 462-550 mg/100 cc.

After the initial weight loss and reduction in girth to 40 inches from the paracentesis, no additional change occurred on a program of bed rest and diuretics. The continued active leakage of chyle was suggested by the oral administration of 100 mg of Sudan III dye mixed with butter and subsequent pink tinging of the chyle within eight hours. Lymphangiography demonstrated extensive extravasation and laking of lymph in the retroperitoneal space from the previous dissection, but the

specific site of leakage was not identified although it was presumed to have resulted from disruption of intestinal trunks along the base of the previously mobilized small bowel mesentery (Fig. 2).



Fig. 2. Lymphangiogram showing lymphatic extravasation.

In an effort to reduce ascites without the loss of protein inherent in repeated paracentesis, a chylovenous shunt was established between the abdominal cavity and the superior vena cava using a PE 190 cannula via a subclavian percutaneous puncture on Dec. 13, 1968. There was an initial slow and constant flow perpetuated by the pressure gradient between abdominal and thoracic cavities. It later became necessary to actively transfer the fluid with a syringe through a three way stopcock. At no time was there any untoward reaction to the intravenous chyle. After the transfer of 6 liters of chyle, his girth had been reduced to 37½ inches. On the 17th of December, the shunt was discontinued in view of increasing difficulty with obstruction of the peritoneal catheter tip by omentum.

Concomitant dietary therapy was designed to reduce the formation of chyle to a minimum. It consisted of a diet pattern supplying most of the protein and carbohydrate from skim milk, fruits, starches and low fat desserts. Regular dietary fat was restricted to 5 gm a day and medium chain triglyceride oil added in enough quantity to insure a reasonably palatable diet in the form of salad oil, butter and frozen desserts. The quantity of regular

dietary fat was gradually increased over the ensuing six weeks.

Twelve hours after discontinuation of the chylovenous shunt, the patient developed a transient staphylococcal septicemia thought to result from contamination during manipulation of the IV tubing connection. This was readily controlled by removing the IV and using appropriate antibiotics. When the patient was discharged on December 24, his girth was 35 inches. Subsequently, girth, weight and muscle mass returned to normal although abdominal exploration and lysis of adhesions for small bowel obstruction were required in March, 1969 and again in September, 1970. Neither of these procedures revealed metastatic disease or the source of the chylous leak.

DISCUSSION

Chylous ascites is a striking and rare manifestation of an internal lymphatic fistula of diverse etiology. It is usually postulated to occur from lymphatic trauma or obstruction associated with congenital anomaly, abdominal or retroperitoneal neoplasm or inflammatory disease.^{2, 3}

Therapy is dictated by the clinical circumstances, but surgical exploration has been advocated if conservative measures fail or the diagnosis is in doubt. At the time of surgical exploration, certain benign obstructions may be relieved and any obvious leaks dealt with. When surgical treatment cannot be used or is unsuccessful, therapeutic alternatives must be considered. In general, the practice of repeated paracentesis is to be disparaged because of the severe nutritional drain inherent in the protein loss. The withdrawal and subsequent intravenous administration of chyle has generally been avoided in view of the reported incidence of serious reactions. In the present instance, the chyle was well tolerated, and it might be postulated that some of the reported difficulty with intravenous chyle may have been the result of bacterial or pyrogenic contamination inherent in the technique used in obtaining and reinfusing the material.

In an effort to attenuate the rate of chyle formation, either total parenteral feeding or certain low fat dietary programs can be most useful. The use of medium chain triglyceride fats provides a unique physiologic means to detour the lacteal system. Body lipids are derived mainly from dietary sources and the vast majority of the lipids from conventional food sources consists of triglycerides of long chain fatty acids. In the absorption process, the long chain triglycerides that are completely hydrolyzed are

(Continued on page 316)

Oral Histoplasmosis Followed by Herpes Zoster

Case Report

HISTOPLASMOSIS as an oral lesion may present a baffling problem to the physician. Clinically and histologically, it has been confused with many diseases. We feel that oral histoplasmosis should be brought to the attention of physicians who may encounter this disease in its oral or systemic manifestations. This case had multiple sites of oral involvement which resembled granulomatous lesions of the gingiva and carcinoma on the lateral tongue margin. After treatment herpes zoster developed and later cleared.

CASE REPORT

A 72-year-old white man, a farmer, was first hospitalized at an outside hospital from July 3, 1969 to July 20, 1969 complaining of a sore mouth, anorexia and weight loss, all of five-months' duration. Physical examination revealed multiple ulcers of the gums and palate. Biopsies of these areas indicated nonspecific chronic inflammatory tissue. Biopsy of an inguinal lymph node was interpreted as "atypical follicular hyperplasia . . . consistent with lymphocytic lymphosarcoma." Histoplasmosis skin test was negative. Chest film showed an early degree of emphysema. Other tests were within normal limits except for an EKG showing a moderate degree of old myocardial injury.

The patient came to the University of Missouri

Medical Center on August 22, 1969, complaining of painful sores in his mouth, pain in the back of his throat and hoarseness. The "sores" in the mouth were aggravated by citrus fruits. Physical examination disclosed erythema of the oral mucosa, hard and soft palates and gingiva (Fig. 1). Multiple white plaques were noted on the dorsum and lat-



Fig. 1 Lesions of oral cavity.

eral aspect of the tongue. The gums appeared hyperplastic and the uvula was edematous. No neck nodes were palpable. Examination of the chest demonstrated mild hyperresonance with occasional dry rales over the left posterior region. The remainder of the physical examination was within normal limits. Complete blood cell count was 5,950 with 45% neutrophils, 39% lymphocytes, 11% monocytes and 5% eosinophils. Culture of an oral lesion produced a heavy growth of *Candida albicans*. Biopsy of the gingiva indicated chronic inflammation with epithelial hyperplasia. Chest x-ray showed the lungs to be emphysematous with right apical scarring and an old calcified node. Lung scan and bone marrows were normal. The patient was treated for candidiasis and discharged on September 14.

In the following month, the lesions did not heal and the patient was readmitted on October 26. At this time, a biopsy of the left lateral side of the

Histoplasmosis is a diagnosis to be considered when difficulty arises in diagnosing mucocutaneous lesions. A case report of oral histoplasmosis is presented here and a differential diagnosis is discussed. The authors are from the University of Missouri Medical Center where Doctor Dawson is a Resident and Doctor Joseph is Professor and Chief of the Section of Otolaryngology. Doctor Boyle is an Associate Professor in the Department of Community Health and Medical Practice.

tongue was performed and tissue sections revealed histoplasma capsulatum. The culture from this biopsy was also positive for histoplasma. A repeat bone marrow study showed granulomatous inflammation, but culture was again negative. Otorhinolaryngologic examination was negative except for the previously mentioned lesions. Complement fixation levels were 1:64 in the mycelial phase and 1:512 in the yeast phase. Intermediate histoplasmosis skin test showed a 10 mm induration. The patient was started on amphotericin B on November 12 and demonstrated an excellent response. Dosages ranged between 5 mg and 50 mg and were adjusted daily on the basis of serum amphotericin B levels and laboratory studies. When amphotericin levels increased above the minimum fungicidal level (0.7-1.0 meq/l of blood), the blood urea nitrogen and creatinine rose. Total dose to Jan. 28, 1970 was 905 mg of amphotericin. The patient was discharged on February 6. At this time, complement fixation levels had dropped to 1:32 in the mycelial phase and 1:128 in the yeast phase. On April 6, the patient developed typical signs of herpes zoster including pain over his right forehead followed in three to four days by a vesicular eruption involving this area, the right side of the nose and the right eyelid. Vesicular erythematous lesions along the ophthalmic distribution of the right trigeminal nerve were noted (Fig. 2). The right eyelid was closed, edematous and partially



Fig. 2 Vesicular lesions of right face.

covered with exudate. The patient also had conjunctivitis and iridocyclitis. The patient had had chickenpox as a child. The patient's herpes zoster cleared by May 25 although he had residual pain when last seen in the clinic in February, 1971.

DISCUSSION

Histoplasmosis, a fungus disease caused by organisms of the genus *histoplasma*, was first noted in Panama by T. Darling in 1906. Worldwide distribution has since been noted although there are distinct endemic areas. The Missouri-Mississippi and Ohio River Valleys are among these endemic areas. The clinical presentation of this disease may occur as a localized or generalized process although many believe that localized oral signs are manifestations of an inapparent systemic infection.¹ The systemic characteristics of fever, weight loss, anemia and leukopenia with involvement of the lung, spleen, liver, lymph nodes, adrenals, skin, kidneys and multiple other organ systems are well known and reviewed elsewhere.² Erroneous interpretations of systemic signs and symptoms have led to the faulty diagnosis of Hodgkin's disease, lymphoblastoma, tuberculosis, carcinoma, aleukemic leukemia and other systemic diseases.³

The oral and respiratory tract symptoms are characterized by cough, swelling, hoarseness, sore throat, dysphagia, dyspnea, rhinitis and, occasionally, pain upon ulceration of the lesions.⁴ Subsequent to ulceration, there may be pain upon eating citrus fruits, as seen in our patient. There may be difficulty with mastication because of oral lesions. Oral involvement may include the oral mucosa, alveolar ridges, hard and soft palates and tongue. Involvement of the nasal septum (perforation), tonsils (peritonsillar abscess), middle ear (otitis media) and larynx has been noted.

Oral lesions may appear in a variety of forms including granulomatous, hyperemic, edematous, verrucous, necrotic, ulcerous and nodular.⁵ Lesions in the larynx and on the palate, tonsils and gums have appeared in similar forms. Oral lesions also may be covered with a gray or pink exudate. The oral lesions of histoplasmosis have been confused with those of carcinoma, Vincent's stomatitis, lymphoma, leukemia, moniliasis, syphilis, leishmaniasis, tuberculosis, blastomycosis, rhinoscleroma and other more uncommon lesions including mucormycosis and midline granuloma.

It is of interest that in our patient, "atypical follicular hyperplasia consistent with lymphocytic lymphosarcoma" was noted histologically in an outside hospital before the diagnosis of histoplasmosis was made. Tissue reaction to histoplasmosis has been confused histologically with malignant lymphomas, granulomas and

other lesions. However, histoplasmosis has been reported to occur concurrently with leukemia, Hodgkin's disease, malignant lymphoma, tuberculosis and cryptococcosis, so a careful search for more than one disease process should be made.³⁻⁵

Some researchers believe that histoplasmosis is an immune deficiency disease, citing an observed lack of leukocytic response to invading microorganisms.⁶ It has been postulated that with depressed host resistance, latent herpes virus may proliferate, producing herpes zoster.⁷ This reaction may be similar to cases of herpes zoster arising after rigorous treatment of Hodgkin's disease. The use of amphotericin B in treatment of histoplasmosis may lower host resistance as well. We hesitate to make any conclusions in regard to our patient's immunological status and his episode of herpes zoster.

Because of the serious nature of disseminated histoplasmosis, thorough studies should be made whenever the diagnosis is considered. Such studies include the histoplasmin skin test, serologic tests including complement fixation and latex agglutination, culture and staining of samples of lesions, sputum, blood, bone marrow, lymph nodes, urine and cerebral spinal fluid. The methods and interpretation of these tests

are described elsewhere.^{8,9} A specific diagnosis is made by demonstrating the causative organism. In a given lesion, histoplasma may be found in large numbers in one part and absent from the remainder.⁴ Thus, care must be taken to obtain adequate samples.

In summary, it is important to consider histoplasmosis in the differential diagnosis of oral lesions so that inappropriate treatment will not be given or proper treatment delayed on the basis of a faulty diagnosis.

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Chylous Ascites

(Continued from page 313)

combined with protein to form chylomicrons which go to the lacteals and, thence, to the lymph system via the thoracic duct. Medium chain triglycerides, which are produced commercially by the fractionation of coconut oil, are absorbed primarily by the portal vein and do not depend upon intestinal combination with protein and the formation of chyle.^{4,5}

In the present case, a dietary regimen involving utilization of medium chain triglyceride preparations in conjunction with a chylovenous

shunt produced a cessation of posttraumatic chylous ascites.

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Cardiac Massage Efficacy Monitored by Doppler Ultrasonic Flowmeter

A Preliminary Report

THE DESIRABILITY and need for a readily available, simple and effective means of continually monitoring closed and open chest cardiac resuscitation efforts are obvious. These observations should provide worthwhile information in regard to the efficiency of each member of a cardiac resuscitation team, augment teaching efforts and help evaluate some of the currently available mechanical cardiac augmentation devices.

Currently, the overall success rate in cardiac resuscitation continues to hover at around 16%.¹ Part of the low survival figure may be attributed simply to ineffectual means of ventricular compression. While intraarterial pressures, blood gas determinations and other parameters are obtainable in the laboratory and occasionally during prolonged resuscitation efforts, the usual cardiac arrest does not lend itself too widely to this approach nor is the equipment available.

In this article, it is our intent to present a means of determining the efficacy of cardiac resuscitative techniques using the Doppler ultrasonic flowmeter as an effective monitoring device.

In 1957, Satomura of Osaka University in Japan used Doppler ultrasound in the investigation of cardiac function.² The same principle was adapted by Franklin, Schlegel and Rushmer to determine bloodflow in animals.³ The

feasibility of determining intravascular pulsatile bloodflow, transcutaneously, with the ultrasonic flowmeter was demonstrated by Watson and Rushmer.⁴ Strandness *et al* described the Doppler flowmeter as a most valuable tool in the evaluation of peripheral vascular occlusive disease.⁵ Keitzer, Lichti and DeWeese have reported on the intraoperative use of this instrument during vascular reconstruction as an adjuvant in the determination of procedural efficacy.⁶ Bingham and Lichti explored its use in the delineation of congenital arterio-venous malformation diagnostically during the surgical correction of these anomalies.⁷ Lichti *et al* use the instrument as a means of atraumatic evaluation of peripheral arterial atherosclerotic disease in order to eliminate the possibility of preoperative trauma in older patients.⁸ The Doppler flowmeter also is used to determine blood pressure levels by indirect means, eliminating intraarterial cannulation for this purpose.⁹

The Doppler unit is an electronic device consisting of an oscillator, a probe (containing two piezoelectric crystals), a receiver, amplifier and a means of listening to the audio output (earphones or speaker) as well as an outlet to tie in a recorder or oscilloscope for graphic display of the signal (Fig. 1). Two commercially available models of the instrument, the 802 and the 806 (manufactured and distributed by

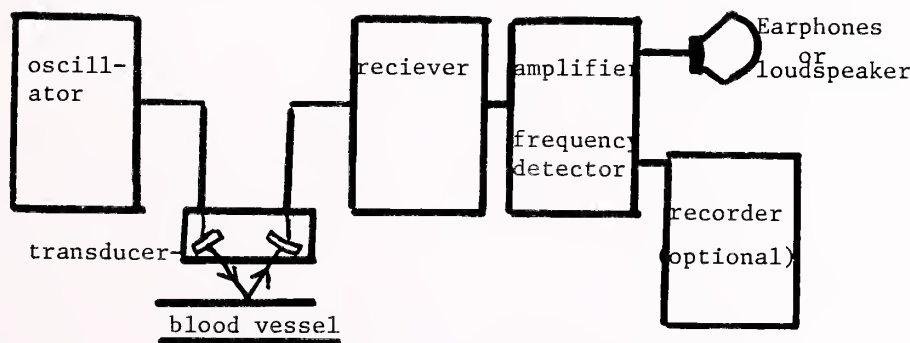


Fig. 1 Block diagram of Doppler model 802.

The authors describe a use of the Doppler ultrasonic flowmeter which aids the physician in estimating the effectiveness of cardiac resuscitation techniques. In addition to being a worthwhile teaching device, the flowmeter provides a relatively inexpensive, rapidly available, atraumatic guide, especially for those situations requiring prolonged resuscitation efforts. Doctor Lichti is an Instructor in Surgery, Mr. Turner is a fourth-year Medical Student and Doctor Stephenson is Professor of Surgery at the University of Missouri School of Medicine. Doctor Willets is an Intern in the Department of Surgery at Bellevue Medical Center, New York University.

Parks Electronics Laboratories, Beaverton, Ore.) are used in our work. The latter is a directional flow instrument.

METHOD

At time of cardiac arrest, the person operating the Doppler instrument takes position at an extremity of the patient and, with the blood pressure cuff in normal arm position, ascertains the blood pressure (systolic) by noting return of flow in the artery after the occlusive cuff pressure is released. In this manner, each individual performing cardiac massage (open or closed chest) may be monitored. If a leg is used to monitor the resuscitation, the blood pressure cuff is placed at the ankle and the return of flow after release of cuff may be noted at the posterior tibial or dorsalis pedis arteries. Systolic pressure readings should be made at regular intervals in order that ventricular compression may be adequately monitored. Subjective studies of perfusion time may be made by estimation of bloodflow time during each cardiac compression. If a recorder is available, a graphic display of the resuscitation may be made and an objective study of perfusion time is possible. Either the flat or pencil type of Doppler probe may be used to monitor a vessel. Use of the instrument as presented herein has no associated morbidity.

CASE REPORTS

Case # 1. A 67-year-old woman progressed from a ventricular arrhythmia to cardiac arrest in the immediate postoperative period. Blood pressures were immediately ascertained by the Doppler technique with the occlusive cuff in the brachial position. The right radial artery was used to determine re-

turn of flow after the release of occlusive pressure. Four surgeons participated in manual resuscitation efforts. A mechanical resuscitator was also employed. Table 1 is a compilation of data obtained.

Case # 2. A 14-year-old girl suddenly developed cardiac arrest two days postoperatively. Closed chest cardiac massage was begun immediately. A manually-operated cardiac massage unit was employed while the patient was taken to the operating room. The chest was opened in the operating room and manual cardiac compression was instituted. The heart was defibrillated and after prolonged open chest cardiac compression, heart action was restored. The heart functioned for a period of approximately two hours when it again became arrested. It would not respond to any further treatment.

Case # 3. A 56-year-old woman was being treated for septic shock following surgery for a ruptured appendix. Nursing personnel were unable to follow her blood pressure by conventional means and a Doppler unit was employed for indirect blood pressure measurements. The patient's heart developed arrest and cardiac resuscitation was begun immediately. Blood pressure monitoring via the Doppler was continued and a Sanborn model 262 dual channel recorder with a model 350-3200 ECG preamplifier was connected to the Doppler unit. With much electronic damping, a graphic display of the resuscitation effort was made (Fig. 2). A cardiac resuscitation unit was utilized during the resuscitation but was abandoned as both pressure and perfusion time during its use were minimal.

RESULTS

In the foregoing case reports, we present a use of the Doppler ultrasonic flowmeter which aids the physician in estimating the effectiveness of cardiac resuscitation techniques. This type of study has been performed previously using arterial cannula and pressure transducers to study peripheral blood pressure patterns during resuscitation efforts. Most cardiac arrests rarely provide opportunities for quickly utilizing pressure transducers intraarterially placed. The Doppler instrument provides a rapid, easily available means of evaluating personnel efficiency of the cardiac arrest team with objectivity.

Table 1 of Case # 1 is an objective and subjective evaluation of cardiac resuscitation. Objective studies of rate and systolic pressure are noted. Subjective evaluation consisted of the Doppler operators estimation of perfusion time of each cardiac cycle. Surgeons # 1, # 2 and # 3 attained an adequate systolic pressure during closed chest massage and blood flow was noted in the peripheral vessel monitored for at least 50% of each cardiac cycle. Surgeon # 4 was able to attain a pressure of 75 mmHg during ventricular compression but perfusion time was

in the range of 10%. This perfusion time appears to be inadequate for peripheral bed circulation. The automated heart lung resuscitator, though only providing a systolic pressure of 60 mmHg, was able to maintain vascular flow for about 75% of each cardiac cycle. Clinical signs and blood gas determinations further demonstrated the efficacy of this resuscitator.

In Case # 2, we were able not only to evaluate the use of a mechanical closed chest heart resuscitator but also to compare peripheral blood flow during surgery in the activity of open and closed chest massage. The manually-operated machine was inadequate. Evaluation of personnel during this resuscitation showed many of the same data as presented in Table 1. Open chest massage following cardiac defibrillation attained an average systolic pressure of 60 mmHg, but the peripheral vessel perfusion time

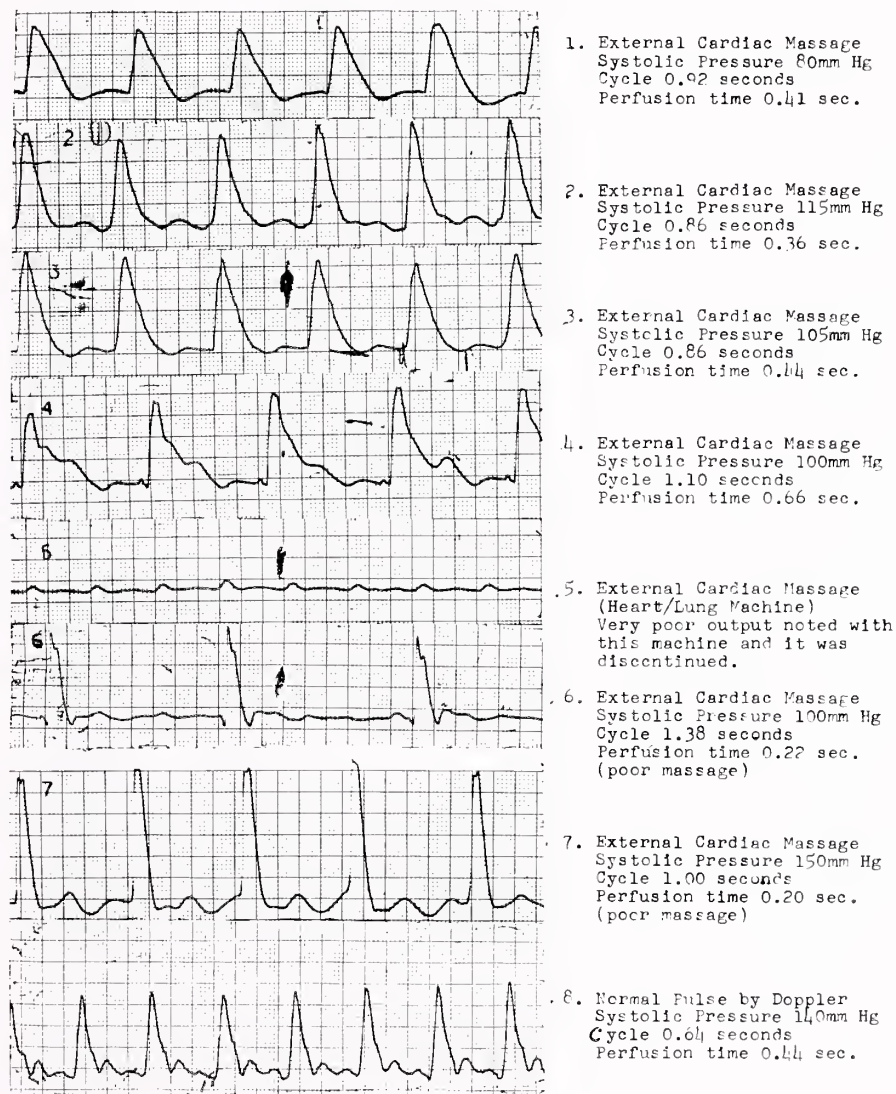
TABLE 1
COMPILATION OF CARDIAC RATE AND
AVERAGE SYSTOLIC PRESSURES
DURING RESUSCITATION OF
CASE # 1

Surgeon	Rate	Average Systolic Pressure (mm Hg)
#1	85	86
#2	85	110
#3	115	95
#4	75	75
Heart-Lung Machine	60	60

was greater than with any other technique monitored.

Case # 3 graphically displays the efficacy of closed chest cardiac massage (Fig. 2). This

Fig. 2. Doppler tracings obtained during closed chest cardiac resuscitation.



display permits the objective evaluation of the technique of the personnel involved in the cardiac resuscitation. The perfusion index, which is the compression rate multiplied by the percent of time flow, was noted in the peripheral vessel per cycle. Maximum perfusion index would be the compression rate multiplied by 100. Normal maximum perfusion index for a heart rate of 72 would be 7,200. By utilizing the directional Doppler instrument, we are able to demonstrate a small backflow component in each cardiac cycle. Because of this backflow component, we may approach the normal maximum perfusion rate but, in actuality, will not attain it.

Table 2, which is a compilation of perfusion indices noted during resuscitation which may be

TABLE 2
PERFUSION INDEX AND MAXIMUM PERFUSION INDEX OR TRACINGS IN FIG. 2

Number	Heart Rate	% Perfusion		PI*	MPI†	NPI‡
		Time				
1.	65	44.5		2,892	6,500	7,200
2.	69	41.8		2,884	6,900	7,200
3.	69	51.0		3,519	6,900	7,200
4.	55	60.0		3,300	5,500	7,200
5.	105		—nil—			7,200
6.	43	15.9		683	4,300	7,200
7.	60	20.0		1,200	6,000	7,200
8.§	93	90.0		8,370	9,300	7,200

* Perfusion Index.

† Maximum Perfusion Index attainable.

‡ Normal Perfusion Index at 72 cardiac cycles/minute.

§ Tracing of a normal individual after exercise. Heart rate, 93; blood pressure, 142/96 with maximal arterial flow.

compared with the maximum and normal perfusion index, provides a basis for objective evaluation of ventricular compression. We suspect that a perfusion index in the range of 40% to 50% of the normal perfusion index of 7,200 is adequate for tissue perfusion as evidenced by ar-

terial blood gases, pupillary constriction, spontaneous respiration and apparent oxygenation of mucous membranes.

SUMMARY

During manual cardiac augmentation, peripheral bloodflow is effectively and readily monitored by the Doppler ultrasonic flowmeter. This technique provides objective observation of the effectiveness of closed or open chest massage at any given time by any technique or by different individuals administering cardiac resuscitation efforts. A calculation of the perfusion index enhances the ability of the physician to make a judgement in regard to the adequacy of cardiac augmentation.

The Doppler ultrasonic flowmeter is an effective adjuvant to the physician's armamentarium during cardiac resuscitation. It is a worthwhile teaching device for an evaluation of those being instructed in cardiac resuscitation techniques. The Doppler flowmeter provides a relatively inexpensive, rapidly available, atraumatic guide, especially in those situations requiring prolonged resuscitation efforts.

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Success of a curriculum guide, *Teaching About Drugs*, has led to the printing of a larger second edition for the nation's schools. The Pharmaceutical Manufacturers Association and the American School Health Association, who cooperated in producing the guide, have announced a second printing of 50,000 copies. The first printing of 25,000 copies has been exhausted. *Teaching About Drugs* is available from the American School Health Association, 107 South Depeyster St., Kent, Ohio 44240. Single copies are \$4 and payment should accompany order.

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Stroke Prevention by Early Recognition of Correctable Cerebrovascular Ischemia

THE EARLY SYMPTOMS of cerebrovascular insufficiency may be so sufficiently subtle that they are easily ignored or passed over as being insignificant, unless physicians are attuned to the initial manifestations of cerebral ischemia. Realizing that three out of every four stroke victims have had warning symptoms in the form of clinically recognizable transient ischemic attacks and that two out of every five patients who do experience episodic cerebral ischemia have surgically approachable atheromatous plaques in extracranial vessels, it is important to identify those patients who exhibit early signs of cerebral ischemia. An example of a localized correctable lesion which produces subtle but characteristic clinical symptoms is occlusion or severe stenosis of the proximal subclavian artery with associated reversed vertebral artery flow and basilar insufficiency. Having recently encountered three symptomatic patients who might have escaped diagnosis, this report, which describes the various manifestations of subclavian steal phenomena exhibited by five different patients, was prepared to review the symptoms, pathology, diagnosis and treatment of a subtle, potentially morbid, yet correctable cause of cerebral insufficiency.

CASE REPORTS

Case # 1. A 63-year-old Florida citrus grower was referred to the University of Missouri Medical Center (UMMC) for evaluation of severe lower extremity claudication. Five years earlier, following two episodes of transient right monocular blindness, thrombo-endarterectomy of the left internal carotid artery had been performed. The patient had not experienced any recurrent symptoms of cerebral ischemia until five months prior to his present admission, when he noticed that tilting his head back to utilize an eyewash would precipitate visual blurring. By selectively closing his left eye during these episodes, he noticed that the blurring was caused by a shade which blotted out the upper half of his right visual field.

Physical examination disclosed a blood pressure of 122/80 mm Hg in the left arm and 100/70 mm Hg in the right arm. Bruits were audible over each carotid bulb, and a thrill was easily palpable on the right. Aside from a faintly detectable right femoral, there were no palpable pulses in either lower extremity. Selective carotid angiography and aortography revealed total occlusion of the right internal carotid and of that portion of the subclavian juxtapositional to the innominate with reversed vertebral flow on this side. In addition, a left vertebral steal was associated with stenosis of the proximal subclavian on this side and, finally, severe disease of the distal aorta included total occlusion of the left common iliac artery.

At operation, innominate-subclavian endarterectomy and patch graft established physiologic flow in the right vertebral and arm. The patient has not had any recurrent symptoms of cerebral ischemia since operation and will soon be readmitted for correction of his lower extremity ischemia.

Case # 2. A 58-year-old auditor presented with a pulsatile, rapidly enlarging mass in the right groin. During the course of his workup, he related a ten-month history of episodic monocular hemianopsia. The patient also was aware that on recent

Since more than 200,000 Americans die annually from stroke and two million others are now living with various sequelae of cerebrovascular accidents, it is critically important to recognize the early manifestations of potentially correctable cerebrovascular insufficiency. The authors cite five case reports and review the symptoms, pathology, diagnosis and treatment of a subtle, potentially morbid, yet correctable, cause of this condition. Doctor Henzel is Assistant Professor of Surgery, Doctor Dexter is Assistant Professor of Medicine and Doctor Doerhoff is a Resident in Surgery at the University of Missouri Medical Center.

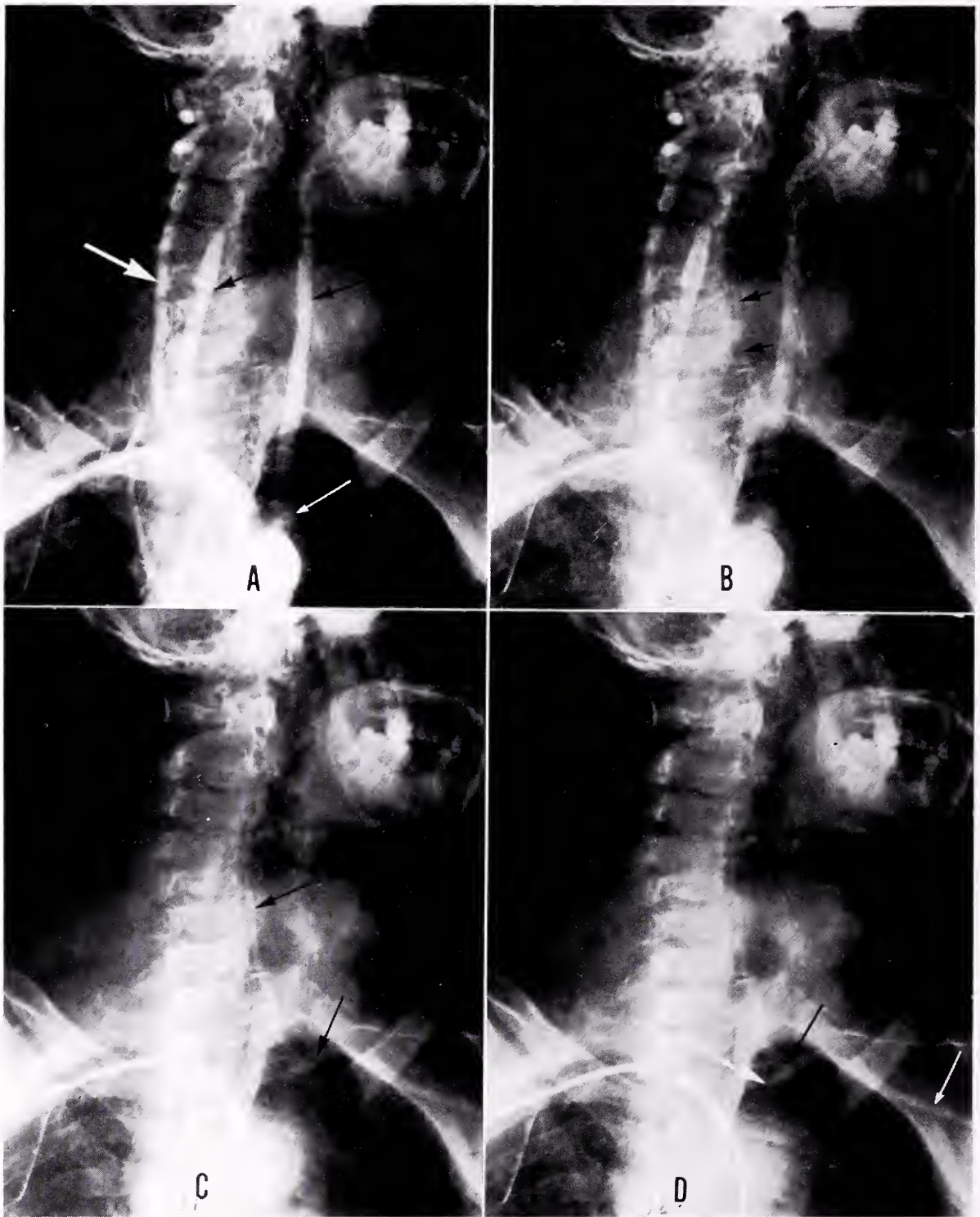


Fig. 1 Left subclavian steal, Case # 2. (A) No. 6 film in angiogram sequence demonstrates both common carotid arteries (black arrows), enlarged right vertebral (large white arrow) and proximal stump of totally occluded left subclavian (small white arrow). Left vertebral is conspicuously absent. (B) Slightly later film is similar to the No. 6 angiogram, but, in addition, early retrograde opacification of the left vertebral artery is evident (black arrows). (C) No. 11 film in sequence reveals definite retrograde vertebral flow (top arrow) down into the left subclavian artery (bottom arrow). (D) No. 12 film demonstrates the level of occlusion (large white arrow) proximal to the vertebral-subclavian juncture (black arrow) and good opacification of the left axillary artery (small white arrow).

occasions, he would hesitate in the middle of a statement, having forgotten what he was talking about. Eight years prior to the present admission, at which time aortofemoral bypass had been performed for total occlusion of the infra-renal aorta, angiography revealed proximal occlusion of the left subclavian artery and retrograde ipsilateral vertebral flow. Following aortic reconstruction, the patient was completely asymptomatic and did not return until the false aneurysm developed.

Physical examination disclosed absence of the left arm below the elbow, and ocular prosthesis on the left (both had been lost as a result of a dynamite cap accident when he was a child), bilateral carotid bruits and a left axillary pulse which was barely palpable. Angiography again revealed the left-sided subclavian steal (Fig. 1), but, in addition, there was moderate stenosis of the proximal left vertebral artery and severe stenosis of both internal carotids. The chief source of cerebral perfusion was an enlarged right vertebral artery. Prior to operation, hemianopsia and mental "slowing" occurred whenever his ordinarily-hypertensive arterial pressure fell below 140 mm Hg. On the second day following subclavian-vertebral endarterectomy and patch-graft angioplasty of the vertebral takeoff, the patient had a severe myocardial infarction, but vision and mental acuity remained sharp despite repeated episodes of hypotension as low as 80 mm Hg. Following a prolonged convalescence, he was discharged and has remained free of cerebral symptoms during the five months since myocardial infarction.

Case # 3. A 49-year-old real estate salesman, who had presented for treatment of longstanding asthma, also indicated that he had recently been experiencing progressively severe dizziness, as well as occasional numbness and tingling in his left arm. Physical examination revealed a palpable difference in radial pulses and a right arm pressure of 120/80 mm Hg compared to 80/60 mm Hg on the left. A supraclavicular bruit was not audible and arch study (Fig. 2) confirmed suspected total occlusion of the proximal subclavian artery with opacification of the distal subclavian via vertebral-basilar siphonage. After using his left arm to crank up the head of his bed on the day of admission, the patient commented that the numbers on the license plate on an automobile parked outside his window became blurred just as he got dizzy. Following uncomplicated endarterectomy, he returned to selling real estate six days a week. When last seen eight months after operation, arterial pressure was similar in each arm and he had not had any recurrence of dizziness or ischemic arm symptoms.

Case # 4. A 41-year-old automobile mechanic presented with a four-week history of intermittent right hand and forearm numbness. Initial episodes were precipitated by vigorous use of the involved arm, and the resulting "pins and needles" sensation would resolve when the arm was rested. About one week prior to admission, the patient noticed that use of his arm also seemed to precipitate dizziness. At this time, his physician noted pulse and blood pressure differentials between the two arms. Physical examination revealed a blood pressure of

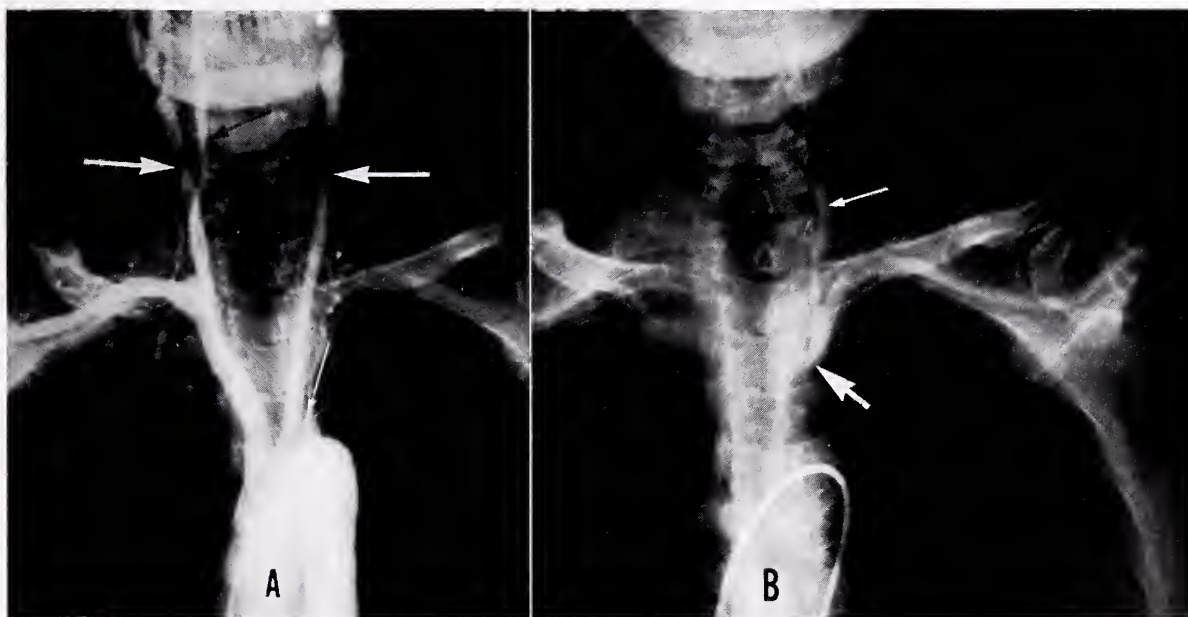


Fig. 2 Left subclavian steal, Case # 3. (A) Early film in angiogram run demonstrates both common carotid arteries (large white arrows) and right vertebral artery (black arrow). The left vertebral is not visible and the small white arrow points to total occlusion of the left subclavian immediately above its origin from the aortic arch. (B) Later film in series demonstrates retrograde left vertebral flow (small white arrow) which perfuses the left arm (black arrow points to subclavian-axillary artery junction). Also evident is the subclavian occlusion (large white arrow), which lies well proximal to the vertebral takeoff.

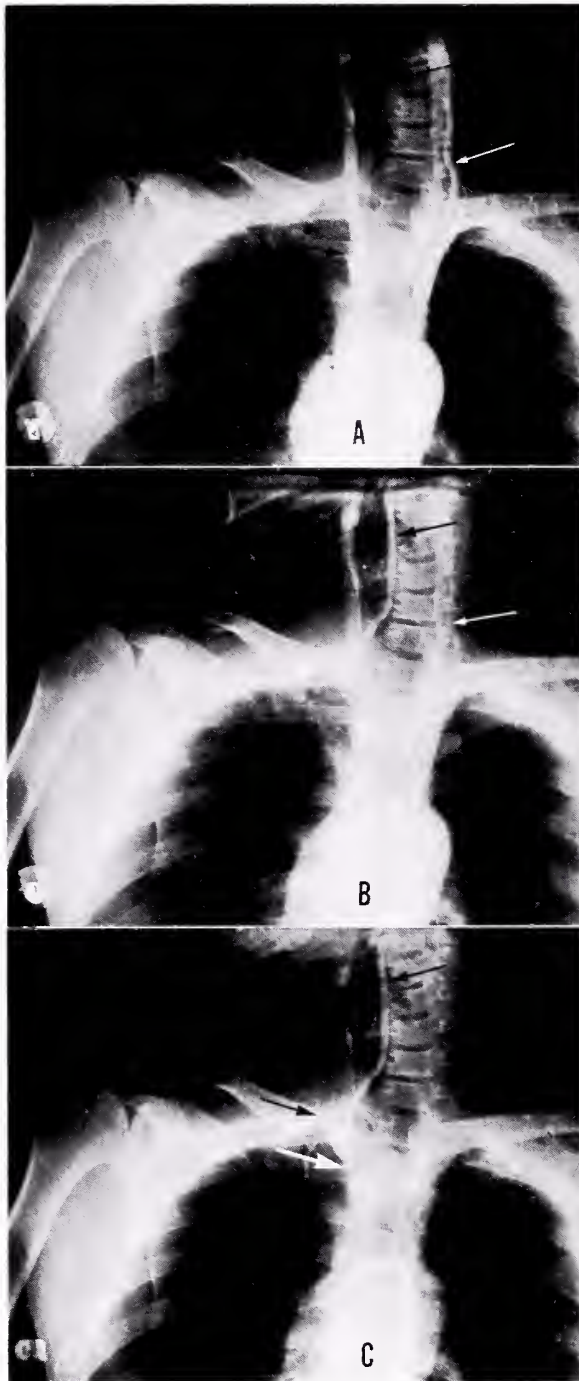


Fig. 3 Right subclavian steal, Case # 4. (A) Although left subclavian artery visualizes, right does not. Lower black arrow points to right subclavian cutoff, immediately juxtaponital to right common carotid take-off from innominate. Left vertebral artery (white arrow) is opacified immediately adjacent to left common carotid, and retrograde flow back down the right vertebral (upper black arrow) is just becoming visible.

(B) Left vertebral artery (white arrow) is now only faintly visible, while right vertebral is well opacified. (C) Retrograde right vertebral fill (upper black arrow) is perfusing the right subclavian (lower black arrow) beyond the proximal block (white arrow).

130/85 mm Hg in the left arm and 90/70 mm Hg in the right arm. A systolic bruit was audible in the right supraclavicular fossa, and isolated exercise of the right arm repeatedly precipitated dizziness. Angiography revealed proximal right subclavian obstruction with delayed filling of the distal artery via reversed vertebral flow (Fig. 3). At operation, a localized plaque was removed. During the four years since endarterectomy, the patient has remained asymptomatic and exhibits nearly identical blood pressure in each arm.

Case # 5. Two years prior to admission, a 45-year-old truck driver began experiencing intermittent dizziness. Approximately six months before seeking medical evaluation, he noticed increasingly frequent dizziness, often associated with numbness of the left arm when he "overused" this extremity. A few weeks preceding hospitalization, he first experienced transient bilateral visual blurring. After narrowly avoiding an accident when a second episode occurred while he was turning the steering wheel of his truck, he sought medical attention. Physical examination revealed diminution of the left radial pulse and a blood pressure of 155/80 mm Hg in the right arm, compared to 110/80 in the left arm. Both carotid and all lower extremity pulses were palpable, but a systolic bruit was audible in the left supraclavicular fossa. An angiographic arch study revealed proximal obstruction of the left subclavian artery, and delayed filming demonstrated retrograde left vertebral flow into the distal subclavian. Endarterectomy was performed. When last seen five years after the operation, the patient was free of symptoms and actively employed as a truck driver.

PATHOPHYSIOLOGY

Fifty years before Contorni¹ first described the subclavian steal phenomena in 1961, leuetic aneurysms and arteritis of the aortic arch were recognized causes of cerebral and upper extremity ischemia. More recently, traumatic and dissecting aneurysms, nonspecific arteritis, atherosclerosis and embolism have been added as lesions which produce stenosis and occlusion of aortic arch branches.

While atherosclerotic plaque is the culpable entity in almost all instances of the vertebral artery flow-reversal which characterizes the subclavian steal phenomena, this pathophysiologic sequence of basilar siphonage has also been described following trauma, in association with congenital atresia of the left subclavian artery or atresia of the aortic arch between the carotid and subclavian, and following ligation or embolic thromboses of the subclavian artery.² In short, any intra- or extravascular process capable of stenosing or occluding the proximal subclavian artery can set a hemodynamic stage conducive

to retrograde flow within the ipsilateral vertebral artery, and possibly-symptomatic basilar insufficiency. In actuality, most occlusive lesions of the proximal subclavian artery do not result in retrograde vertebral flow; however, larcenous vertebral "siphoning" of the posterior cerebral circulation can occur when pressure within the distal subclavian artery is sufficiently less than that within the basilar artery.

Reivich³ demonstrated that a pressure differential of 10% is sufficient to initiate this sequence of events and approximated reverse-flow volumes of 100 ml per minute in both of his symptomatic patients. Although this flow-volume represents only about one tenth of the normal cerebral perfusion, Reivich also demonstrated experimentally that the overall result of proximal subclavian occlusion and reversed vertebral flow may be a 40% reduction in total cerebral blood flow. Contorni recognized that symptoms of basilar insufficiency do not universally occur with reversed vertebral flow and that in most symptomatic steals, less-than-normal total inflow through the other cerebral vessels, either alone or in association with congenital variations of the basilar system, enhances the overall reduction in cerebral perfusion. Similarly, in some of the instances in which stenotic or occlusive proximal subclavian lesions do not precipitate reversed vertebral artery flow, associated carotid or intracerebral vascular disease or congenital variation may be present to a sufficient degree that basilar artery pressure also is significantly diminished, and flow reversal cannot occur.

When there is significant stenosis or occlusion of the subclavian artery, exercise of the ipsilateral arm requires augmented perfusion of that arm. With a critically occlusive lesion proximal to the vertebral artery and altered hemodynamics which favor vertebral flow reversal, exercise of the arm will precipitate or increase basilar siphonage. All-in-all, the subclavian steal phenomena is dependent upon occlusion or stenosis proximal to the vertebral takeoff, with a significant drop in distal subclavian blood pressure, such that a differential of at least 10% exists between basilar and subclavian artery pressures. When these hemodynamic parameters exist, the stage is set for basilar siphonage. Once vertebral flow becomes retrograde, exercise of the ipsilateral arm, presence or absence of associated extra or intracerebral vascular pathology and the degree of variably-present congenitally abnormal intracranial arterial perfusion will determine the threshold and severity of ischemic symptoms.

SYMPTOMS AND CLINICAL FINDINGS

The most frequent symptoms associated with a pure subclavian steal are those of basilar insufficiency. Thus, some combination of vertigo, ataxia, syncope and diplopia or some other more subtle visual disturbance, such as blurring, is usually present. The classic symptom complex is complete when exercise of the ipsilateral extremity precipitates symptoms in that arm and also triggers or aggravates vertebro-basilar symptomatology. Reported arm symptoms include coolness, paresthesia, numbness and burning or aching in the fingers, hand and, occasionally, the forearm.³ Arm claudication is a variable occurrence, which is not surprising since numerous subclavian-pulmonary shunts have been performed without complaints of ischemic symptoms. Moreover, prior to current vascular techniques, transected subclavian or axillary arteries were not infrequently ligated and relatively few instances of arm claudication resulted. Nonetheless, arm symptoms are present in about 50% of the reported cases of subclavian or innominate occlusive disease. Also, in about one out of every two patients who have subclavian steal, exercise of the arm will precipitate or aggravate associated neurologic symptoms.⁴

Clinical findings in the classic case consist of pulse-amplitude and arterial-pressure differentials between the arms and a variably-present supraclavicular bruit when stenosis, rather than total occlusion, is the offending lesion. Arterial pressure differentials greater than 40 mm Hg mean subclavian or axillary block until proven otherwise, and a difference of only 20 mm Hg is highly suggestive of compromised flow.⁵ If exercise of the low-pressure arm precipitates symptoms of basilar insufficiency, either with or without ischemic arm symptoms, there is a good chance that proximal subclavian occlusion and vertebral siphonage is present.

It is important to keep in mind that the symptoms and findings outlined above are not pathognomonic of subclavian steal, since vertebral basilar insufficiency and upper extremity claudication may occur, alone or in combination, without vertebral flow reversal. The usual extracranial cause of isolated basilar artery insufficiency is occlusive disease of the proximal vertebral artery, and one of the more common causes of arm symptoms is neurovascular compression associated with the various thoracic outlet syndromes.

DIAGNOSIS

As indicated immediately above, not all patients with basilar insufficiency have reversed vertebral artery flow, and not all patients with ischemic arm symptoms or upper extremity pulse-pressure differentials (or both) have proximal intraluminal occlusive lesions of the subclavian artery. Similarly, most patients with vertebrobasilar insufficiency do not experience arm symptoms or exhibit upper extremity pulse-pressure differentials, and such entities as cervical rib and neurovascular thoracic-outlet compromise usually occur without any associated symptoms of cerebral ischemia. Patients with a true subclavian steal have a total deficit in cerebral perfusion which is greater than would exist with isolated stenosis or occlusion of the ipsilateral vertebral artery. An actual siphon exists, such that a portion of contralateral vertebral or carotid flow or both (depending on existing hemodynamics within the circle of Willis) intended for the brain is, in actuality, being centrifugally shunted into the ipsilateral arm. It is now well recognized that a subclavian steal may precipitate symptoms ordinarily attributed to carotid insufficiency, and we were not surprised when correction of the steal alleviated carotid ischemia-type symptoms in three of our patients.

Accurate diagnosis depends upon properly performed angiography, since errors during catheter positioning and injection can produce iatrogenic-flow-reversal. If injection pressure sufficiently exceeds systolic blood pressure, dye deposited in the subclavian artery may flow up one vertebral artery, traverse the basilar system and opacify the contralateral vertebral vessel in a retrograde direction. This phenomena is most apt to occur when the tip of an angiography catheter is in close proximity to a vertebral orifice.

Although properly performed and correctly interpreted arteriography is virtually diagnostic, Javid's group has described an ingenious clinical test for picking up flow reversal.⁶ After obtaining baseline oscillometric recordings in each arm, they compressed the carotid artery on the affected side and noted that 13 of 15 patients who had arteriographically demonstrated subclavian steals exhibited an abrupt and easily distinguishable drop in oscillometric pressure on the affected side during vascular compression. The hemodynamics of this test supports clinical evidence suggesting that even when contralateral cerebral vessels are patent, a significant portion of ipsilateral carotid flow is preferentially shunted down the offending vertebral.

In order to employ this clinical test, the degree of vascular compromise to the extremity must not be so extensive that oscillometric recording is negligible. All in all, clinical awareness, high index of suspicion and careful physical evaluation can diagnose most cases of subclavian steal prior to angiography. Angiographic study is necessary to outline the precise location and extent of the offending lesion. Moreover, since many of the patients with a symptomatic subclavian steal also have occlusive disease of the carotid(s) or of the contralateral vertebral artery or of both, it is critically important that angiographic technique demonstrate the aortic arch and innominate artery, both carotids and vertebrals, and intracerebral vasculature.

TREATMENT

The management of symptomatic occlusive disease of the aortic arch branches is surgical, once careful neurologic evaluation has established or confirmed that the vertebral siphonage is clinically significant. Since the course of each subclavian vessel differs so completely from its contralateral mate and since the precise location and extent of any block is variable, the operative approach should be carefully individualized.⁷

When a short block involving the right subclavian of a thin individual is localized just proximal to the origin of the vertebral artery, a supraclavicular approach with division of the sternomastoid muscle frequently provides adequate exposure. For patients who are obese, muscular or have short thick necks, or when a block lies near or involves the innominate artery, safe proximal control and exposure are best achieved by splitting the sternum and, if necessary, extending the incision into the right third intercostal space. The left subclavian artery, which lies deeper and courses more posteriorly, may be exposed through a combined clavicular-sterno-intercostal incision or via an anterior or posterolateral thoracotomy. Vascular patency may be restored by endarterectomy, patch-angioplasty or bypass graft.

Endarterectomy, the most frequently utilized method, was employed successfully in all of the patients reported herein. However, as illustrated in Fig. 4, endarterectomy was complemented by patch-graft angioplasty in Case # 1, since the chronically occluded subclavian segment was narrowed at its juncture with the innominate. Moreover, the diseased subclavian also was frag-

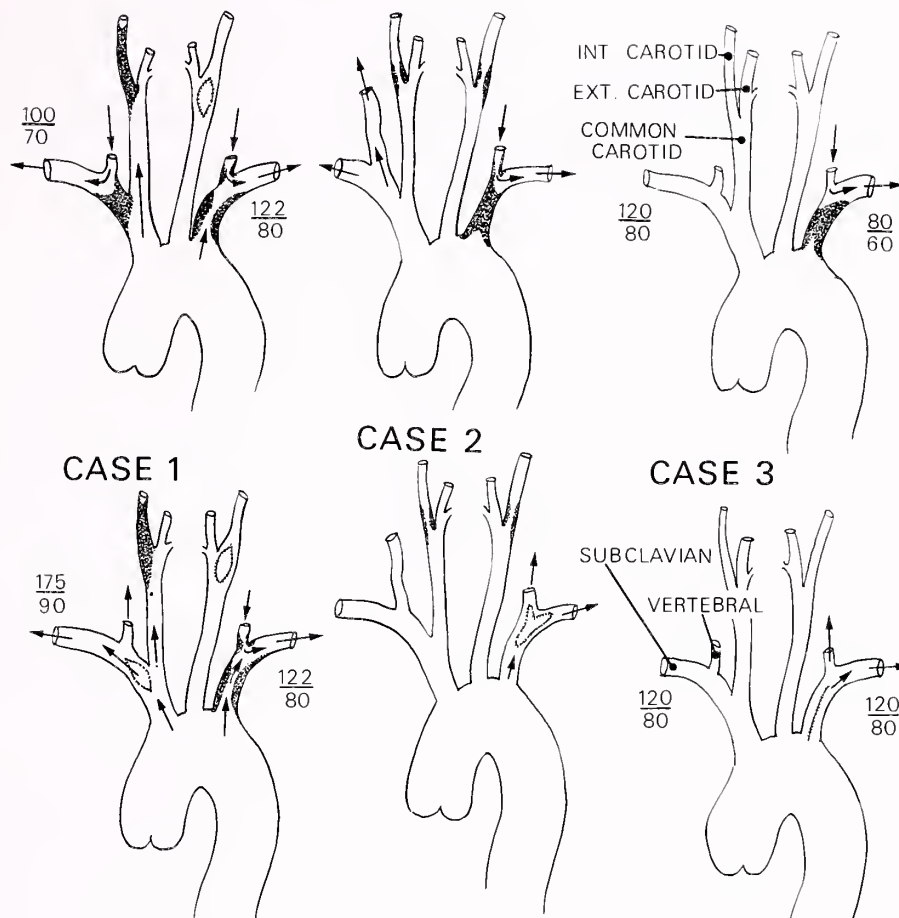


Fig. 4 Graphic illustration of preoperative vertebral steal (top) and individualized surgical treatment (bottom).

ile, and the generous suture-bites, which would have been necessary to assure safe arteriotomy closure, would have compromised the arterial lumen even further. By employing a patch, we were able to simultaneously achieve safe closure and restore normal arterial diameter.

In Case # 2, the occlusive subclavian plaque extended into and partially narrowed the origin of the vertebral artery. Therefore, in order to insure a widely patent vertebral takeoff (since both internal carotids were tightly stenotic, optimal vertebral flow was critical to overall cerebral perfusion), an inverted T-shaped teflon patch (Fig. 4) was employed to widen the arterial channel at the subclavian-vertebral juncture. As illustrated by these two cases, individualization of vascular repair is particularly critical when carotid or ipsilateral vertebral disease or both is present.

In instances of pure vertebral steal, careful reestablishment of subclavian patency will alleviate vertebrobasilar and arm symptoms in nearly all cases. However, when carotid or contralateral vertebral disease or both are present

simultaneously, detailed and experienced neurologic evaluation is necessary to decide which lesion is primarily responsible for clinical symptomatology. In deciding whether to first approach a carotid stenosis or a subclavian steal, the clinician should be cognizant of the fact that the latter constitutes a unique form of cerebral insufficiency, since cerebral perfusion actually is increased as soon as the siphoning vertebral has been clamped. In practically all other forms of surgically correctable cerebrovascular ischemia, particularly carotid insufficiency, arterial clamping, however temporary, interrupts an already-compromised cerebral perfusion.

SUMMARY

Early symptoms of cerebrovascular insufficiency may be so sufficiently subtle that they are easily ignored or passed over as being insignificant unless physicians are attuned to the initial manifestations of cerebral ischemia. Realizing that three out of every four stroke victims ex-

(Continued on page 330)

Radiation Therapy of Primary Spinal Cord Neoplasms

PRIMARY MALIGNANT TUMORS of the spinal cord are rare. Early diagnosis is exceedingly difficult without surgical exploration. The value and place of surgery as a single modality has been well defined and outlined.¹⁻³

The histopathological features of these primary neoplasms were studied by Sloof, Kernohan *et al.* Their series comprises 301 cases which are classified as follows:⁴

- A. *Gliomatous tumors*—269 cases
 - Ependymomas 169 cases
 - Astrocytomas 86 cases
 - Oligodendrogliomas 6 cases
- B. *Non-Gliomatous Tumors*—29 cases (10%)
 - Includes meningiomas, neurofibromas, vascular tumors, sarcomas, lipomas and cysts.

The incidence of primary intramedullary tumors is about 22.8% of all primary neoplasms arising in the spinal canal.⁴

G. Lombardi and his coworkers reported on 244 patients, 35 (14.3%) of whom were recorded in this series as having primary spinal cord neoplasms. In 4% of the cases, multiple tumors were encountered.⁵

Intramedullary metastatic lesions from distant primaries are rare.

Our interest is focused on Group A or gliomatous tumors since they are more commonly encountered and for which a combined surgical-radiotherapeutic approach is frequently used. Group B tumors are a surgical problem exclusively and are rather benign lesions. Consequently, radiotherapy has very little to offer.

The diagnosis of an intramedullary malignant primary neoplasm is difficult; neurological examinations followed by myelographic x-ray studies usually provide adequate guidelines with presumptive diagnosis and localization of the lesion.

As a final step, surgical exploration is mandatory for the following reasons:

1. It demonstrates gross pathology and provides tissue diagnosis.
2. It defines exact location and extent of the lesion.

3. It determines the operability of the lesion.
4. Decompressive laminectomy is needed whether or not tumor is resectable.
5. It furnishes suitable ground for radiotherapeutic approach as a postoperative measure.

The following requirements are needed for postsurgical irradiation:

- a. Tissue diagnosis.
- b. Accurate dimensions of the tumor to ascertain irradiation fields.
- c. Decompressive laminectomy as a preirradiation procedure to compensate both postsurgical as well as radiation-induced edema during the course of radiation treatment. As a matter of fact, in most tumor situations, postoperative irradiation followed by decompressive laminectomy with or without surgical removal became a standing and standard combined treatment procedure.

The value of postoperative irradiation is difficult to assess. However, there are convincing evidences that some intramedullary neoplasms, such as ependymomas which are radiosensitive and also radiocurable, should be benefitted by irradiation treatment, particularly when they are inoperable or incompletely resected. Although astrocytomas have limited radiosensitivity, they are usually responsive at the normal tissue tolerance level. Other types of gliomas have a wide range of radioresponsiveness. When surgical removal is complete, the value of postoperative irradiation is uncertain. In cases of incomplete removal, however, it is most likely a valuable adjunct.

Primary gliomas of the spinal cord rarely metastasize to meninges; their effect is to transect the cord and induce paraplegia.

According to E. Wood and Taveras, the evolution of untreated spinal cord tumors is progressive, resulting in crippling and death. The average life expectancy of patients treated solely by surgery is about six years.⁷

On the basis of the Mayo Clinic series, there were evidences of clinical improvement with arrest of tumor growth and survival beyond the

six-year average rate when radiation therapy was supplemented.

In a Montreal Neurological Institute series, of 30 patients who had positive tissue diagnosis, all received postoperative irradiation.

The minimum follow-up period was more than six years. The breakdown of these cases was as follows:

- 9 Ependymomas
- 6 Astrocytomas
- 8 Unclassified gliomas
- 1 Glioblastoma
- 3 Meningeal tumors
- 3 Miscellaneous

Predilection sites are as follows:

- 16 in thoracic spinal cord
- 8 in the cervical cord
- 6 in the lumbar segment and filum terminale

RADIOTHERAPEUTIC APPROACH

Postoperative irradiation usually starts ten to 14 days after surgery, following the removal of sutures.

In most radiation therapy centers, a single protracted course of radiotherapy was given to those patients, preferably by supervoltage radiation devices or telecobalt therapy machines.

Ernest Wood and his co-workers reported 62 cases. All received postoperative irradiation with kilovoltage radiation sources.

A 200 r air dose per day was given to each sitting, through a single posterior treatment portal.

In many instances, repeated courses of irradiation were given several months or even years after the original course of radiation treatment. A tumor dose of 1,500-2,000 r per course was repeated and gratifying results have been obtained. He advocates this method of radiation therapy over a single intensive treatment course.

In the Montreal series, except for the first few patients who received 4,000-5,000 Rads in 40 to 45 days by kilovoltage techniques, all others were treated by a telecobalt therapy machine and received 5,000 Rads TD over 45 to 60 days; these treatments were given through a single posterior portal covering the entire laminectomy incision generously with 4^m width.

Of the 30 patients, 18 (60%) survived five years or longer. Ten-year survival was just above 50%.⁶

The prognosis for patients with primary intramedullary neoplasms was difficult to relate to the histology of the tumor.

In our institution, we have adopted the following method of treatment:

We believe a basic dose of 5,000 Rads is essential as an absolute minimum to the spinal cord gliomas.

A single posterior portal, covering generously the entire length of the laminectomy incision, is utilized. With a dose rate of 750 Rads per week (five-day weeks schedule), 3,000 Rads TD is given in four weeks as the first phase of a split course technique and, thereafter is a three-weeks' resting period.

In the second phase of the treatment, the patient will receive additional 2,000-2,500 Rads TD or more within three weeks or so.

At the completion of treatment, the patient will receive 5,000-5,500 Rads in not less than ten weeks as total treatment time. Clinical experience indicates that over fractionation, reduction of the dose rate coupled by additional split course techniques will provide better therapeutic results without endangering the spinal cord as well. Field size is the next important factor; however, it is not as critical as dose rate. The longer the segment of cord exposed, the greater the risk.⁸ When cervical spinal cord lesions are treated, it is important not to include the entire length of it and the total dose should not exceed 5,000 Rads.

In our department, we have utilized this technique. However, only three cases have been treated so far and none of them followed more than two years.

In the past, due to the fear of spinal cord complications, these lesions were treated exclusively below the 4,500 Rads level in four to five weeks. This dose level should be considered sublethal for gliomatous lesions of the spinal cord.

CONCLUSION

According to experience, adequate postoperative irradiation is likely beneficial, contribut-

In this study of radiation therapy of primary spinal cord neoplasms, interest was focused on Group A gliomatous tumors as they are commonly encountered and on a combined surgical-radiotherapeutic approach. The experience indicates that adequate postoperative irradiation is beneficial and contributes to the arrest of tumor progression, as well as to the inducement of regression. Doctor Ozarda is Associate Professor of Radiation Therapy and Chief of the Radiation Therapy Division, University of Missouri School of Medicine.

ing to arrest of tumor progression and inducing regression as well.

The merit of preoperative irradiation, if any, is not known since this combination has not been tried so far. The value of irradiation alone as a sole modality of treatment followed by simple biopsy procedure at the time of decompressive laminectomy also is very difficult to assess, because the number of such cases is too small to compare with the combined treatment procedure.

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Stroke Prevention

(Continued from page 327)

perienced clinically-recognizable warning symptoms, and that two out of every five patients who do experience such episodes of transient cerebral ischemia have surgically approachable atheromatous disease,⁸ it is important to identify those patients who exhibit early signs of cerebral ischemia.

The subclavian steal syndrome constitutes one example of cerebrovascular insufficiency in which a localized correctable lesion produces subtle but characteristic symptoms. However, as visual blurring, dizziness and upper extremity numbness or pain worsen, a concerned patient seeks evaluation. Diagnosis can be made from the history, by an observed disparity between upper extremity pulses and blood pressure and, when stenosis rather than total occlusion exists, by the presence of a supraclavicular bruit. Once arteriography has localized the culpable lesion and exhibited the vertebral larceny, individualized angioplasty will restore physiologic subclavian-vertebral flow and alleviate symptoms in nearly all cases.

More than 200,000 Americans die annually from stroke, and two million others are presently living with various sequelae of cerebrovascular

accidents. As suggested by these figures and as evidenced by the case reports outlined herein, it is critically important to recognize the early manifestations of potentially correctable cerebrovascular insufficiency. Once early symptoms have been recognized, accurate neurologic evaluation, detailed angiographic study and individualized surgical management will lessen that unfortunate, but presently continuing, fraction of stroke victims whose unheeded warning symptoms were caused by a localized correctable lesion.

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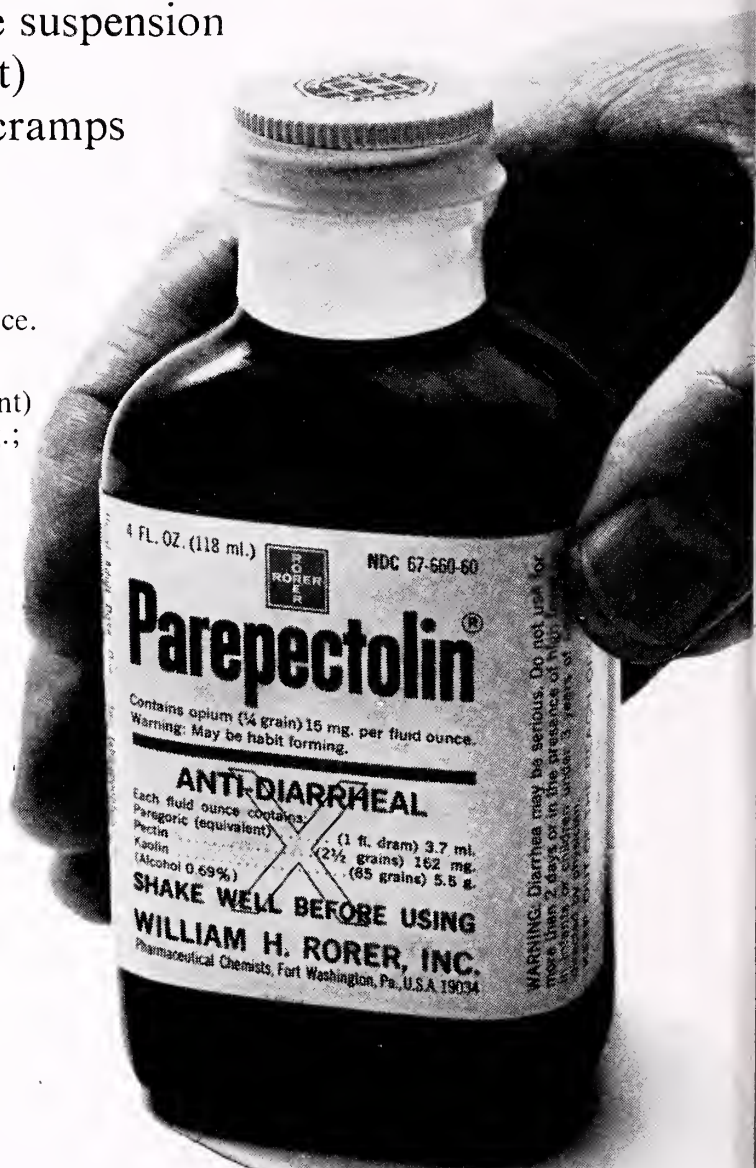
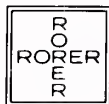
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President's Message

"Communicate."—It would appear that we overuse that word. However, it seems to become increasingly important. The complexities of our daily lives, I am certain, are primarily responsible for this overuse. The health industry has become immense, perhaps accounting for one tenth to one twelfth of the gross national product. Legislative bodies at the state and federal levels have been busy for the past decade legislating the "right of health" for everyone or, perhaps more correctly, attempting to legislate better delivery of health care to everyone with emphasis on the aged and the needy. Their efforts have met with varying degrees of success. However, this effort plus that of other third party intermediaries now reach well over 85% of our U.S. population with some type of health insurance.

Medicine for much of the past century has concerned itself with its educational process and its quality of care. In the past three decades, as a result of this effort, medicine has presented to its patients an entire new armamentarium. New methodology, concepts, drugs and understanding have replaced or expanded much of previous medical care. This major evolution of medicine has required the education and involvement of many technologists in these parameters of medicine. Significant fragmentation of medicine per se has resulted from our efforts to gain expertise in all the facets of health.

Paradoxically through specialization and great advance in capacity, we have been weakened politically and sociologically through lack of a strong, collective voice and we are under attack from all corners because of poor distribution of health care and for skyrocketing health costs. Much of this indictment can hardly be logically laid at our feet, however. We are neither immaculate nor without some degree of vulnerability. It is time to shape up or ship out. If we cannot have unity and communicate logically within the profession, then our ability to work with and understand the rest of the health industry, not withstanding the rest of society, will be seriously compromised. The key to this essential communication is the individual physician and the county medical society. However, organizational structure at the state and national level (AMA) exists for effective, democratic resolution of our many problems. With unity and mature, appropriate communications, medicine as you and I know it will not only survive, but flourish.



Gerald L. Miller, M.D.

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Woman's Auxiliary



Working with Mrs. William (Pat) Walker, the retiring President of the Woman's Auxiliary, has made the past year so busy and pleasant, I sincerely regret that it has ended. Pat has been an exciting and wonderful president. Her ideas and actions on behalf of Auxiliary matters have been inspiring to me at all times. We are all in her debt for the devotion and zeal she brought to her job. Thank you, Pat, for an outstanding Auxiliary year.

At the State Convention in St. Louis, Mrs. G. Prentiss Lee, as National President-Elect, told of her plans to streamline the AMA Auxiliary program. Also, the Environmental Health Committee of the MSMA Woman's Auxiliary, which initiated its work last year, reported remarkable accomplishments.

It is gratifying to report that the Woman's Auxiliary to the Missouri State Medical Association is the first in the nation to actively and effectively work on this important and vitally-phased program. It is my hope that both the MSMA and the Auxiliary members will continue to encourage this new committee and, in fact, increase our support.

There is so much we, *as doctors' wives*, can do. Our initial accomplishments on behalf of environmental health are a prime example. These thoughts bring me to my theme for the year, 1971-1972.



Mrs. Frank J. Valach
President

THE KEY TO A SUCCESSFUL AUXILIARY IS INDIVIDUAL INVOLVEMENT

I cannot stress too strongly my feeling that all members of the State Auxiliary, both new and long-time members, should involve themselves in one or two projects or committees for the year. We will strive to act as catalysts in other groups to improve present health problems in our communities and to achieve even better communications between the Auxiliary and other interested local agencies. We hope to acquaint them all with what the MSMA and the Auxiliary are doing and gain their interest and support.

This will be a decisive year for medicine in so many ways. It is imperative that we all become involved collectively and as individuals. I promise you I will.

EDITORIAL

THE OUNCE OF PREVENTION COSTS LESS THAN THE POUND OF CURE

"The Ounce of Prevention Costs Less Than the Pound of Cure!" This motto has been recently adopted by the St. Louis Health Division as an illustration of one of the basic precepts of Public Health. One that, aside from the aesthetic idea that we all should be healthy and happy, illustrates the practical aspect of Public Health, in which the various disciplines have a mandate to do the greatest good for the greatest number of people at the smallest possible cost to society. While this may seem a rather trite explanation, it is, simply, what Public Health is all about.

The St. Louis Health Division is a specialist in Preventive Medicine—the population of the city is its patient. The Health Division's job is to *keep you healthy, because it costs less to keep you healthy than it does to cure you once you have become ill!* The difference in the cost of giving a polio immunization or maintaining a child in an "iron lung" is so vast as to be virtually impossible to compute. The cost of eliminating the rats from a neighborhood cannot be compared to the cost of combating an epidemic of bubonic or pneumonic plague, murine typhus or rat-bite fever. Would we

spend more on spraying a stagnant pool of water with oil and insecticide than in hospitalizing a large segment of our population with yellow fever, malaria or encephalitis? Does it cost less to treat people for undulant or Q fever than it does to maintain a pure milk supply? Aside from the monetary consideration, absence of sickness and pain is an important factor. The discomfort occasioned by the family dog when he receives his annual Rabies shot is *nothing* compared to the daily pain suffered by a child undergoing the Pasteur Treatment!

The Health Division, however, like a great many other agencies and individuals, has fallen victim to inflation. Rising costs and diminishing income is making it extremely difficult to maintain a safe level of community health using past methods. This situation creates a new challenge to the Health Division. It must plan and devise ways to use its resources more efficiently than ever before, to provide increased and better medical care, more accessible, more convenient, more acceptable and closer to the people.

WILLIAM C. BANTON II, M.D., M.P.H.
Health Commissioner, City of St. Louis

Continuing Education Coming Events

- | | |
|-----------|---|
| May 3-4 | Symposium—Coronary Artery Disease: Medical and Surgical Management
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| May 6-7 | Symposium—Inhalation Therapy
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| May 7-9 | Missouri Governor's Conference on Arthritis
Ramada Inn, Jefferson City 65101 |
| May 12-13 | Spring Clinical Conference
Continuing Education. M.U. School of Medicine
Columbia 65201 |
| May 14 | Symposium—Infectious Diseases
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| May 21 | Ninth Annual Pediatric Seminar—"Children and Animals"
Baptist Memorial Hospital
6601 Rockhill Rd., Kansas City 64131 |

County Society News

FIRST DISTRICT

COUNCILOR

JOHN N. MARTIN, M.D., ST. JOSEPH

BUCHANAN COUNTY MEDICAL SOCIETY

Forty area physicians attended the March 3 meeting of the Buchanan County Medical Society, which followed a social period and dinner at the Ramada Inn in St. Joseph.

Dr. Sharon E. Waggoner presided at the meeting and business session. Two programs were presented.

Mr. Bill Benson, USV Pharmaceutical Co. representative, presented a film, "Diabetes," and distributed monographs on the disease to those viewing the film.

Dr. Joseph L. Fisher, President of the Missouri State Medical Association, introduced Dr. Paul Young and Mr. Luther Thomas. Mr. Thomas is associated with the Medicare Section of Blue Cross. The speakers presented a discussion on "Criteria for Admission and Regulations Covering Extended Care."

A spirited discussion and question-and-answer period followed the program. Dissatisfaction was expressed in the lack of information provided by the Social Security Administration to physicians regarding rules and regulations for placing Medicare patients in extended care facilities.

RANDAL W. WEED, M.D., *Secretary*

GRAND RIVER MEDICAL SOCIETY

The regular meeting was held at the Strand Hotel in Chillicothe on March 11. Twenty-two members, wives and guests were present.

Guests who were introduced included Lester E. Wolcott, M.D., professor and chief, Section of Physical Medicine and Rehabilitation, University of Missouri Medical Center; Paul Gatens, M.D. of the University Medical Center; and Mr. and Mrs. Don Chapman of Chillicothe.

The ladies adjourned to their separate meeting where Mr. Chapman, an attorney, discussed "Wills and Trusts."

Doctor Wolcott presented a discussion on "Neck Injuries" that proved to be of more than usual interest.

At the short business meeting, it was moved, seconded and approved to waive the reading of the February minutes. It was moved that the

Grand River Medical Society go on record as opposing any use of state funds to subsidize any private medical school in Missouri. The motion was approved. A resolution to this effect will be prepared by Dr. John Dixon, Brookfield, and will be presented at the Annual Session of the Missouri State Medical Association in April.

The meeting was adjourned.

FRANK R. DALEY, M.D., *Secretary*

SIXTH DISTRICT

COUNCILOR

WILLIAM D. BRADSHAW, M.D.,
CLINTON

LAFAYETTE-RAY COUNTY MEDICAL SOCIETY

The Lafayette-Ray County Medical Society March meeting was held on March 9 at Maib's Cafe in Lexington. Eighteen members and guests were present for dinner. Guests included Mr. Donald Hardy, attorney-at-law, and Mrs. Hardy of Kansas City.

After a short business meeting, President K. Herbert Huber turned the meeting over to Mr. Hardy who discussed medical malpractice suits.

Mr. Hardy stated that at the present rate, apparently one out of every six physicians will be sued for malpractice. He said that one of the prime reasons for an increase in malpractice suits is due to the fact that many years ago, the medical profession requested and received authority to govern itself, and it is his belief that it has not done so adequately.

He mentioned several aspects of the practice of medicine which could be improved in regard to medical-legal aspects and which might aid a physician in avoiding malpractice situations and give him a better defense, if one should occur. These primarily were related to accurate, detailed records, adequate evaluation and informed consent.

He made a plea to members of the medical profession to give of their time and knowledge on the witness stand as often as called upon for this duty in order that his profession could better defend the medical profession.

The meeting was adjourned following the program.

WAYNE BOYDSTON, M.D., *Secretary*

NINTH DISTRICT

COUNCILOR

E. E. STRICKER, M.D., ST. JAMES

SOUTH CENTRAL COUNTIES MEDICAL SOCIETY

The South Central Counties Medical Society met at the Holiday Inn in West Plains on March 24. Hosts for the evening were Dr. and Mrs. M. L. Fowler of West Plains. Dr. and Mrs. Michael Gentry of Springfield were special guests.

Doctor Gentry, a dermatologist with the Smith-Glynn-Callaway Clinic in Springfield, presented an interesting and informative program on "Tattoo Removal and Hair Transplants."

Members present were Dr. and Mrs. Rollin H. Smith, Dr. and Mrs. Fowler, Dr. and Mrs. W. T. Morgan and Dr. and Mrs. Jack Wiles of West Plains; Dr. and Mrs. C. W. Cooper of Thayer; Dr. and Mrs. Amos Coffee and Dr. C. F. Smith of Willow Springs; Dr. and Mrs. James Hasek, Dr. Martin Hasek of Mountain Grove; and Mr. Jerry Farcus, University of Missouri preceptee with Doctors Hasek.

JACK N. WILES, M.D., *Secretary*

TENTH DISTRICT

COUNCILOR

EUGENE T. HANSBROUGH, M.D.
POPLAR BLUFF

MINERAL AREA COUNTY MEDICAL SOCIETY

Members of the Mineral Area Medical Society were guests of the Mineral Area Medical Society Auxiliary at a Doctor's Day dinner on March 30 at the St. Francois Country Club near Farmington. Forty-four people attended the event. Among those present were physicians and their wives from Bonne Terre, Desloge, Farmington, Flat River, Ironton and Potosi.

Following a social hour and excellent dinner, Dr. Jack Mullen of Bonne Terre entertained the group with photographic slides illustrating his tour last summer of medical facilities in Europe and the Soviet Union.

C. W. CHASTAIN, M.D., *Secretary*

DOCTOR—Please take home each copy of your MISSOURI MEDICINE! Members of the Woman's Auxiliary have expressed an interest in reading your MSMA Journal.

Brief Summary of Prescribing Information—9-9/22/69. For complete information consult Official Package Circular.

Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.

Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)

Usual Dose: 1 tablet b.i.d.

Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®

hydroflumethiazide, 50 mg./reserpine,
0.125 mg. protoveratrine A, 0.2 mg.

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Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin[®]

hydroflumethiazide, 50 mg./reserpine,
0.125 mg. protoveratrine A, 0.2 mg.



New Members

Gaudencio L. Agasino, M.D., 5203 Chippewa, St. Louis, has become a member of St. Louis Medical Society. Dr. Agasino is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1961. He specializes in obstetrics and gynecology.

Bashir Ahmad, M.D., 1515 Lafayette Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Ahmad is a native of West Pakistan, received his preliminary education at Khalsa College and his M.D. degree at King Edward Medical College in 1953. He specializes in anesthesiology.

Osius A. Almiron, M.D., 6150 Oakland Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Almiron is a native of the Philippines, received his preliminary education at Far Eastern University and his M.D. degree at Far Eastern University in 1963. He specializes in general surgery.

Jose Mario V. Alonso, Jr., M.D., 10110 Hilltop Dr., St. Louis, has become a member of St. Louis Medical Society. Dr. Alonso is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1956. He is in general practice.

Jean Meledain Auguste, M.D., 3530 Laclede, St. Louis, has become a member of St. Louis Medical Society. Dr. Auguste is a native of Haiti, received his preliminary education at Port-au-Prince, Haiti, and his M.D. degree at the Medical School of Haiti in 1956. He specializes in pediatrics.

Calixto Ramon Arguelles, M.D., Farmington State Hospital, Farmington, has become a member of Mineral Arca County Medical Society. Dr. Arguelles is a native of Cuba, received his preliminary education at Lycee Janson de Sailly and his M.D. degree at the University of Paris in 1936. He specializes in internal medicine.

F. F. Bechtold, M.D., V.A. Hospital, Poplar Bluff, has become a member of Butler-Wayne-Ripley County Medical Society. Dr. Bechtold is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1938. He specializes in surgery.

Charles H. Bentlage, M.D., 25th & Jackson, Joplin, has become a member of Jasper County Medical Society. Dr. Bentlage is a native of Rich Hill, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1959. He specializes in general surgery.

George D. Bollozos, M.D., 1693 Kingsford Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Bollozos is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1963. He specializes in pathology.

Thomas E. Bourke, M.D., 206 Northland Medical Bldg., St. Louis, has become a member of St. Louis Medical Society. Dr. Bourke is a native of Richmond Heights, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1964. He specializes in internal medicine.

Edwin Earl Bowe, M.D., 515 E. High, Jefferson City, has become a member of Cole County Medical Society. Dr. Bowe is a native of Frackville, Pa., received his preliminary education at Dickinson College and his M.D. degree at New York Medical College in 1955. He specializes in anesthesiology.

Pedro C. Cayabyab, M.D., 601 S. Brentwood Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Cayabyab is a native of the Philippines, received his preliminary education at the University of the Philippines and his M.D. degree at Far Eastern University in 1964. He specializes in general surgery.

Francois R. Charles, M.D., 5834 Waterman Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Charles is a native of Haiti, received his preliminary education at Lycee Philippe Guerrier des Cayes and his M.D. degree at the Faculte de Medecine d'Haiti in 1957. He specializes in internal medicine.

Shu-sum Cheuk, M.D., 5535 Delmar Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Cheuk is a native of Hong Kong, China, received his preliminary education at Johns Hopkins University and his M.D. degree at Washington University in 1964. He specializes in general surgery.

Byung Ho Choi, M.D., 1402 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Choi is a native of Korea, received his preliminary education at Severance Union Medical College and his M.D. degree at Severance Union Medical College in 1953. He specializes in pathology.

Stephen R. Crespin, M.D., 660 S. Euclid Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Crespin is a native of Cincinnati, Ohio, received his preliminary education at Harvard College and his M.D. degree at Harvard Medical School in 1965. He specializes in internal medicine.

John C. Crighton, M.D., Professional Building, Springfield, has become a member of Greene County Medical Society. Dr. Crighton is a native of Springfield, received his preliminary education at Southwest Missouri State College and his M.D. degree at the University of Missouri in 1965. He specializes in general surgery.

Richard Dawson, M.D., 807 Stadium Rd., Columbia, has become a member of Boone County Medical Society. Dr. Dawson is a native of Oakland, Calif., received his preliminary education at the University of California and his M.D. degree at the University of California in 1965. He specializes in pulmonary diseases.

Beauvoir H. Edmond, M.D., 4047 Easton Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Edmond is a native of Haiti, received his preliminary education at Ecole Freres St. Marc and his M.D. degree at the Faculty of Medicine in 1955. He specializes in radiology.

H. John Erickson, M.D., 1501 S. Grand, Sedalia, has become a member of Pettis County Medical Society. Dr. Erickson is a native of Minneapolis, Minn., received his preliminary education at the University of Minnesota and his M.D. degree at the University of Minnesota in 1963. He specializes in orthopaedic surgery.

Francisco R. Esparrago, Jr., M.D., 801 Lincoln, Monett, has become a member of Ozarks Medical Society. Dr. Esparrago is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1963. He specializes in general surgery.

Clarence B. Francisco, M.D., 24th & Gillham Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Francisco is a native of Kansas City, Kans., received his pre-

liminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1954. He specializes in neurology.

Alexander S. Geha, M.D., 216 S. Kingshighway, St. Louis, has become a member of St. Louis Medical Society. Dr. Geha is a native of Beirut, Lebanon, received his preliminary education at the American University of Beirut and his M.D. degree at the American University of Beirut in 1959. He specializes in thoracic and cardiovascular surgery.

Prabhak Giraparnont, M.D., 1358G McCutcheon, St. Louis, has become a member of St. Louis County Medical Society. Dr. Giraparnont is a native of Thailand, received his preliminary education at Chulalongkorn University and his M.D. degree at Chulalongkorn University in 1966. He specializes in internal medicine.

John H. Ippensen, M.D., 600 S. Glenstone, Springfield, has become a member of Greene County Medical Society. Dr. Ippensen is a native of Quincy, Ill., received his preliminary education at Knox College and his M.D. degree at the University of Illinois in 1964. He specializes in otolaryngology and maxillofacial surgery.

Noel M. Johnson, M.D., 1211 S. Glenstone, Springfield, has become a member of Greene County Medical Society. Dr. Johnson is a native of San Antonio, Texas, received his preliminary education at the University of Kansas and his M.D. degree at Washington University in 1963. He specializes in psychiatry.

Jose C. Kayanan, M.D., 2929 Baltimore, Kansas City, has become a member of Jackson County Medical Society. Dr. Kayanan is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1952. He specializes in general surgery.

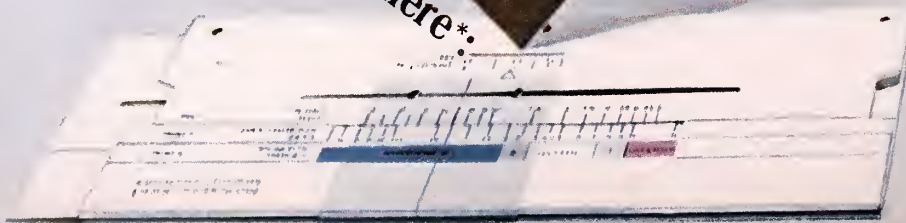
Fred H. Lundgren, Jr., M.D., Box 1159, Kansas City, has become a member of Jackson County Medical Society. Dr. Lundgren is a native of Salina, Kan., received his preliminary education at Iowa State University and his M.D. degree at St. Louis University in 1937. He specializes in internal medicine.

Clarence A. Martin, M.D., 2206 E. 10th, Joplin, has become a member of Jasper County Medical Society. Dr. Martin is a native of Muldrow, Okla., received his preliminary education at Northeast State College and his M.D. degree at the University of Oklahoma in 1963. He specializes in general and vascular surgery.

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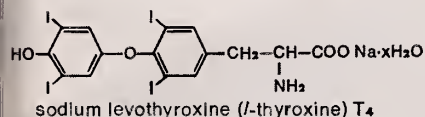
sodium levothyroxine (T_4)
sodium liothyronine (T_3)

*Clark, F., and Horn, D. B.: Assessment of thyroid function by the combined use of the serum protein-bound iodine and resin uptake of ^{131}I -triiodothyronine, J. Clin. Endocrinol. 25:39 (Jan.) 1965.

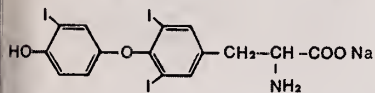
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Caution: Federal law prohibits dispensing without prescription.

Euthroid is synthetic microcrystalline sodium levothyroxine (T_4) USP and synthetic microcrystalline sodium liothyronine (T_3) USP combined in a constant 4:1 ratio.



sodium levothyroxine (l-thyroxine) T_4



sodium liothyronine (l-triiodothyronine) T_3

Actions: Euthroid provides replacement therapy for the thyroactive material normally supplied by the human thyroid. The normal thyroid gland produces and stores thyroglobulin, the active components of which are two metabolically active hormones: l-thyroxine and liothyronine. Euthroid (liotrix) provides a combination of these hormones in purified, synthetic form, supplied in a constant 4:1 ratio in order to simulate as closely as possible the physiologic and metabolic effects of normal endogenous thyroid secretions.

In contrast with the individual synthetic, metabolically active hormones, Euthroid will usually produce normal results for PBI, T_3 , and other thyroid function tests—consistent with clinical progress—when persons with endogenous thyroid deficiencies are made euthyroid. Sodium liothyronine (T_3) acts more rapidly and for a shorter period of time than preparations of biological origin. Customarily, its use as a single agent produces inappropriately decreased PBI values. Sodium levothyroxine (T_4), on the other hand, is more tightly bound by plasma protein fractions and is somewhat slower acting than sodium liothyronine (T_3); its use as a single agent tends to produce inappropriately elevated PBI values. Euthroid, with its unvarying 4:1 ratio of T_4/T_3 , permits interpretation of appropriate laboratory tests consistent with the total clinical status of the patient.

Indications: Euthroid (liotrix) provides thyroid replacement therapy in all conditions of inadequate production of thyroid hormones,

namely:

- 1) Hypothyroidism, including cretinism and myxedema.
- 2) Simple (nontoxic) goiter.
- 3) Subacute or chronic thyroiditis including Hashimoto's disease.
- 4) Prevention of goiter in hyperthyroid patients undergoing treatment with thiouracil derivatives.
- 5) Usage in patients who may manifest intolerance to thyroid products of animal origin.

Contraindications: Acute myocardial infarction, adrenal insufficiency, hypersensitivity to any component of this drug.

Warnings: Liotrix should not be used in the presence of cardiovascular disease unless thyroid replacement therapy is clearly indicated. If the latter exists, low doses should be instituted (Euthroid-1/2 or Euthroid-1) and increased by the same amount in increments at 2-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out and adrenal deficiency due to hypopituitarism corrected before liotrix therapy is started.

If hypothyroidism and adrenal insufficiency exist concomitantly, cortisone or similar steroids should be given at dose levels sufficient to correct the adrenal insufficiency before attempting replacement therapy with thyroid hormones.

Likewise, the possibility of alterations in the prothrombin time must be considered and closely monitored in patients on anticoagulant therapy.

Myxedematous patients are very sensitive to thyroid hormones, and dosage should be started at a very low level and increased gradually.

Precautions: Hypothyroid patients are especially sensitive to thyroid preparations, and those with severe hypothyroidism may be unusually so.

Initiation of thyroid replacement therapy in patients with diabetes must be carefully monitored because of potential fluctuation in daily insulin or oral hypoglycemic requirements.

As with all thyroid preparations, this drug will alter the results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage of thyroid preparations can produce signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Initial dosage should be low and gradually increased at 2-week intervals until the desired clinical response is obtained.

Laboratory criteria of euthyroidism include a PBI of 3.5 to 8 mcg; T_3 , T_4 , and BEI tests are useful.

For most patients, a single daily dose of Euthroid-1, -2, or -3 will maintain euthyroidism. Transfer of a patient from a maintenance dose of another thyroid preparation to Euthroid can usually be effected smoothly. See table for initiating therapy or converting from other thyroid preparations.

Euthroid (liotrix)	Approximate Equivalents			
	Natural	Thyroid USP	Synthetic	
Tablet	T_4^*/T_3^{**}	mcg	T_4^*	T_3^{**}
Euthroid-1/2 pale orange	(30/7.5)	1/2 grain	.05 mg	12.5 mcg
Euthroid-1 light brown	(60/15)	1 grain	.1 mg	25.0 mcg
Euthroid-2 violet	(120/30)	2 grains	.2 mg	50.0 mcg
Euthroid-3 gray	(180/45)	3 grains	.3 mg	75.0 mcg

* T_4 =sodium levothyroxine (l-thyroxine)

** T_3 =sodium liothyronine (l-triiodothyronine)

Dosage for cretinism or severe hypothyroidism in children is the same as for adults with myxedema. Eventual maintenance dosage in the growing child may be higher than in the adult.

Overdosage: Symptoms—Headache, instability, nervousness, sweating, tachycardia, and unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm; chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

Treatment—Shock—Supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered. **Supplied:** Square W/C monogrammed tablets of four potencies, each identified by a different color (see table); bottles of 100 and 1000.

E-GP-11-4C



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Morris Plains,
N.J. 07950.

Teresita C. Padilla, M.D., 8655 Brookshire Lane, St. Louis, has become a member of St. Louis Medical Society. Dr. Padilla is a native of the Philippines, received her preliminary education at the University of the Philippines and her M.D. degree at the UERM Medical Center in 1965. She specializes in obstetrics and gynecology.

Mauro Alcala Paez, M.D., 2639 Miami, St. Louis, has become a member of St. Louis Medical Society. Dr. Paez is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1959. He specializes in pathology.

Nenita Prieto-Basa, M.D., 2601 Whittier, St. Louis, has become a member of St. Louis County Medical Society. Dr. Prieto-Basa is a native of the Philippines, received her preliminary education at the University of the Southern Philippines and her M.D. degree at Southwestern University in 1961. She specializes in pediatrics.

Ricardo M. Ramirez, M.D., Kneibert Clinic, Poplar Bluff, has become a member of Butler-Wayne-Ripley County Medical Society. Dr. Ramirez is a native of Mexico, received his preliminary education at the University of San Luis Potosi and his M.D. degree at the University of San Luis Potosi in 1954. He specializes in pathology.

Harold P. Robb, M.D., 722 Jefferson, Jefferson City, has become a member of Cole County Medical Society. Dr. Robb is a native of Scotland, received his preliminary education at Robert Gordon's College and his M.D. degree at

Aberdeen University in 1951. He specializes in psychiatry.

Howard H. Roberts, M.D., 3209 McClelland Blvd., Joplin, has become a member of Jasper County Medical Society. Dr. Roberts is a native of Ava, received his preliminary education at the University of Missouri-Kansas City and his M.D. degree at the University of Missouri in 1964. He specializes in obstetrics and gynecology.

Louis V. Rosell, D.O., 7520 Natural Bridge Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Rosell is a native of New York, N. Y., received his preliminary education at the College of the City of New York and his D.O. degree at Kirksville College of Osteopathy and Surgery in 1945. He is in general practice.

Generoso P. Roxas, M.D., 601 S. Brentwood Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Roxas is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1962. He specializes in internal medicine.

Shabbir Safdar, M.D., 915 N. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Safdar is a native of India, received his preliminary education at the Government College and his M.D. degree at Nishtar Medical College in 1961. He specializes in internal medicine.

Maynard L. Sisler, M.D., 215 Teaco Rd., Kennett, has become a member of Dunklin County Medical Society. Dr. Sisler is a native of Massillon, Ohio, received his preliminary education at the University of Southern California and his M.D. degree at Northwestern University in 1956. He specializes in internal medicine.

Wellington B. Stewart, M.D., Missouri Regional Medical Program, Columbia, has become a member of Boone County Medical Society. Dr. Stewart is a native of Chicago, Ill., received his preliminary education at the University of Notre Dame and his M.D. degree at the University of Rochester in 1945. He specializes in pathology.

Herbert B. Taylor, M.D., 1325 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Taylor is a native of Pensacola, Fla., received his preliminary education at George Washington University and his M.D. degree at George Washington University in 1954. He specializes in pathology.



"I'll bet MY Dad takes more pills than your Dad!"

(Continued on page 341)

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INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.

PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.

ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.

HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

New Members

(Continued from page 340D)

Fred A. Thomas, M.D., 807 Stadium Rd., Columbia, has become a member of Boone County Medical Society. Dr. Thomas is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at the University of Missouri in 1965. He specializes in dermatology.

Paul M. Weeks, M.D., 4960 Audubon Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Weeks is a native of Clinton, N. C., received his preliminary education at Duke University and his M.D. degree at the University of North Carolina in 1958. He specializes in plastic surgery.

A. W. Wilson, D.O., 2359 Chambers Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Wilson is a native of Tulsa, Okla., received his preliminary education at the University of Illinois and his D.O. degree at Kansas City College of Osteopathic Medicine and Surgery in 1955. He specializes in general surgery.

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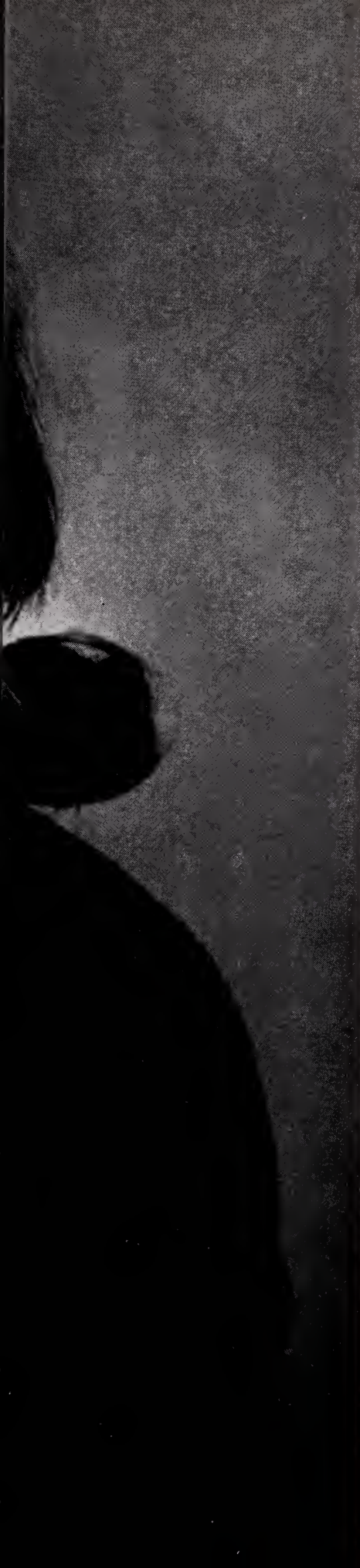
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Although not all clinicians agree on the value of vasodilators in vascular disease, several investigators¹⁻⁴ have reported favorably on the effects of isoxsuprine. Effects have been demonstrated both by objective measurement^{2,4} and observation of clinical improvement.^{1,3} Indications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebotic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). Composition: VASODILAN tablets, isoxsuprine HCl 10 mg. and 20 mg. Dosage: Oral—10 to 20 mg. t.i.d. or q.i.d. Contraindications and Cautions: There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. Side Effects: Occasional palpitation and dizziness can usually be controlled by dosage reduction. Complete details available in product brochure from Mead Johnson Laboratories. References: 1. Clarkson, I. S., and LePere, D. M.: *Angiology* 11:190-192 (June) 1960. 2. Horton, G. E., and Johnson, P. C., Jr.: *Angiology* 15:70-74 (Feb.) 1964. 3. Dhrymotos, A. D., and Whittier, J. R.: *Curr. Ther. Res.* 4:124-128 (April) 1962. 4. Whittier, J. R.: *Angiology* 15:82-87 (Feb.) 1964.

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From the Medical Schools



UNIVERSITY OF MISSOURI

A renowned psychiatrist and teacher and an international authority on childhood reading disabilities, Dr. Lloyd J. Thompson, clinical professor emeritus of psychiatry at the University of North Carolina, has been named as the 15th recipient of the University of Missouri's Annual Medical Citation of Merit Award.

The presentation to the M.U. alumnus was made at a luncheon meeting of the Missouri Medical Alumni Association on April 16 in conjunction with the annual meeting of the Missouri State Medical Association in St. Louis.

After attending the University of Missouri-Columbia and graduating from its two-year medical school in 1917, Doctor Thompson completed his last two years of medicine at Washington University in St. Louis, receiving his M.D. degree in 1919. He is a native of Princeton.

After his internship and specialty training, Doctor Thompson served for three years as director of a private sanatorium in St. Joseph. In 1926, he went to the East Coast and for 16 years was on the faculty at Yale University. During this time he was the executive officer of Student Mental Hygiene and psychiatrist in charge of the Institute of Human Relations at Yale and director of Psychiatric Service for the Community, New Haven, Conn.

During World War II he was senior consultant in neuropsychiatry for the European theatre of operations. After the war, he went to Bowman Gray School of Medicine of Wake Forest University, Winston Salem, N. C., as professor and chairman of the Department of Psychiatry and Neurology, a post he held ten years.

In 1960, he moved to the University of North Carolina in Chapel Hill as clinical professor of psychiatry and remained in that position until his retirement in 1965.

Doctor Thompson has been an active member of numerous professional organizations related to his field of specialty and has received a number of awards for his work. One of the most recent is the Samuel T. Orton Award for 1970 in recognition of his studies on language disorders. In addition to his book on reading disabilities, he has published 54 scientific reports in medical journals.

A Jefferson City psychiatrist, Dr. Henry V.

Guhleman, was installed as president of the Missouri Medical Alumni Association at the April 16 meeting. He is a 1942 graduate of the University of Missouri.

All over the United States, senior medical students learned on March 29 where they will be serving their internships next year. "Matching Monday" culminates the national computer program which matches up interns and hospitals across the nation.

Fifty-five percent of Missouri's 85 June graduates will be working next year at primary major medical centers, most of them teaching hospitals connected with medical schools. Twenty-two percent will remain at the University of Missouri-Columbia Medical Center.

Overall, a larger percentage of the class chose to remain in Missouri. Four percent will go to Kansas City General Hospital; one to Jewish Hospital, St. Louis; 5% to St. John's Mercy, St. Louis; and 6% to St. Luke's in Kansas City.

In the big picture, 69% of the class got their first choice of internships (the best record of any class in the 15 years of Missouri's four-year School of Medicine) and another 10% got their second choice.

WASHINGTON UNIVERSITY

A \$2,000,000 grant was awarded on March 11 by seven tobacco firms and a tobacco growers association to a basic research program at Washington University on the immunologic properties of cancer. It is the largest research grant ever made by the tobacco industry to a single institution.

Studies to be supported by the grant are under the direction of Lauren V. Ackerman, M.D., an internationally renowned authority on cancer, and Dr. Paul E. Lacy, M.D., Ph.D., one of the world's leading experts on cell structure. Doctor Lacy is Edward Mallinckrodt Professor and heads the Department of Pathology, Washington University Medical School. Doctor Ackerman is professor of pathology and surgical pathology.

Clarification of the immunologic processes involved in cancer could have important implications in the early diagnosis, treatment and prevention of certain cancers, and in further studies on the basic nature of malignancy.

The Washington University research program, to be supported solely by the tobacco industry grant, is aimed at finding and analyzing specific "foreign" substances called antigens within the human cancer cell which are not present in normal cells. Usually, the body responds to antigens by producing antibodies to destroy the antigens and the cells producing them. This is known as the immune response.

On March 16, Doctor Ackerman was named the 36th recipient of the Janeway Medal of the American Radium Society at a meeting in Mexico City. The medal, the highest honor of the Radium Society, is for outstanding contributions to science.

The only other St. Louisian to receive the Janeway Medal was Dr. A. Norman Arneson, professor of clinical obstetrics and gynecology at the Washington University School of Medicine. He received the award in 1963.

An annual lecture, honoring the distinguished career of Thomas H. Burford, M.D., professor of clinical cardiothoracic surgery, has been established at the School of Medicine.

Clarence S. Weldon, M.D., professor of surgery and head of the Division of Cardiothoracic Surgery, in making the announcement, said, "Doctor Burford has honored American medicine with a continuing and consistently productive career in the management of diseases of the heart and lungs. He has been responsible for the training of a generation of thoracic surgeons. His accomplishments over the past quarter century have proved to be an outstanding service to Washington University, Barnes Hospital and the entire St. Louis community."

A native Missourian, Thomas H. Burford received the A.B. degree in 1931 and the B.S. degree in medicine in 1933 from the University of Missouri. In 1936, Yale University presented him the M.D. degree.

Michael E. DeBakey, M.D., professor and chairman of the Department of Surgery and president of Baylor College of Medicine, Houston, Texas, will deliver the first annual "Thomas H. Burford Lecture in Thoracic Surgery" on May 27, 1971 at 4 PM in Clopton Amphitheatre, 4950 Audubon Ave., St. Louis.

The Deafness Research Foundation (DRF) has awarded a \$10,000 research grant to a National Institute of Neurological Diseases and Stroke (NINDS) trainee in otolaryngology of Washington University School of Medicine.

I. Kaufman Arenberg, M.D., will conduct research on sharks to study Meniere's disease, a condition causing excess fluid in the inner ear in humans. A portion of the work will be performed at the Lerner Marine Laboratory, a

field station of the American Museum of Natural History of New York, on the island of Bimini in the Bahamas. Richard Torack, M.D., professor of pathology, and director of the Medical School's neuropathology laboratory, will work very closely with Doctor Arenberg.

ST. LOUIS UNIVERSITY



Thomas F. Frawley, M.D.

Dr. Thomas F. Frawley, professor and chairman of the Department of Internal Medicine at the St. Louis University School of Medicine, was designated Governor for the State of Missouri of the American College of Physicians at the annual meeting of the Association held in Denver. During the meetings, Doctor Frawley served as Professor for "Meet the Professor" sessions in answering basic and clinical endocrinology problems. In the sessions, the professor holds informal, unstructured discussions daily with the internists and specialists in attendance, answering questions posed by them. Doctor Frawley was chosen by the College to lead these discussions.

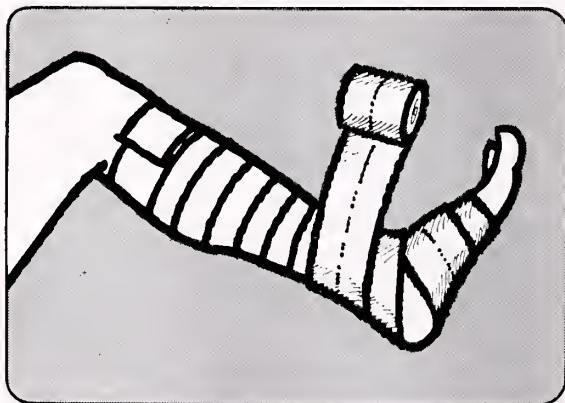
Doctor Frawley has made major contributions in the treatment of diseases of the adrenal gland, thyroid disorders and diabetes mellitus. In 1951, he developed a special electrolyte test for the diagnosis of high blood pressure which has become a standard diagnostic tool. He is one of the early developers of a fast acting thyroid hormone for patients with thyroid insufficiency and has developed a number of specialty tests for the diagnosis of hypoglycemia. These tests are widely used. He has written extensively on the various aspects of diabetes mellitus including both the overactive and the underactive adrenal.

Dr. C. Rollins Hanlon, director of the American College of Surgeons, Chicago, and former professor and chairman of the Department of Surgery at the School of Medicine, was the recipient of the sixth Ralph A. Kinsella, Sr. award

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Dr. V. L. Willman, who succeeded Doctor Hanlon as professor and chairman of the Department of Surgery in 1969, presented Doctor Hanlon a framed citation in recognition of his contribution to academic medicine as a distinguished professor and surgeon.

Dr. Robert Dean Mattis, professor and chairman of the Department of Ophthalmology, delivered a lecture titled "Recent Advances in the Techniques of Cryosurgery" on March 11 before the Tenth Mexican Congress of Ophthalmology which met in Guadalajara, Jalisco, Mexico. The invitation to lecture was by the president of the Mexican Congress of Ophthalmology.

Dr. Peter W. Kinsella, assistant clinical professor of internal medicine, has been elected president of the Missouri Chapter of the American Thoracic Society for 1971. He succeeds Dr. John B. Devine. Doctor Devine presided as chairman for the Missouri Chapter of the Tri-State Pulmonary Disease Conference at Indianapolis, Ind. on March 6, 1971.

Dr. George C. Kaiser, professor of surgery, and 20 junior and senior students at the School of Medicine were initiated into the University's chapter of Alpha Omega Alpha, national honor society, on March 18. Dr. William H. Crosby, chairman of the New England Medical Center in Boston, was the guest speaker at a lecture held in conjunction with the annual banquet.

Dr. J. Gerard Mudd, associate professor of internal medicine, delivered a paper titled "Natural History and Surgical Results in 464 Patients with Isolated Ventricular Septal Defects" before the American College of Cardiology meeting held in Washington, D. C. on February 4. He also delivered this paper at the meeting of the American College of Physicians in Denver on April 1.

Richard L. Stensrud, Jr., assistant director of the St. Louis University Hospitals, became the associate director on April 1. William S. Atkinson, who has been associate director of the Hospitals since September 1, 1966, has been named administrator of the St. Joseph's Hospital in Augusta, Ga.

Dr. Raymond G. Slavin, director, Section of Allergy and Immunology, gave a talk on "Allergic Aspergillosis" at the Cleveland Allergy Society, Cleveland, Ohio. Dr. Clement Sullivan, associate clinical professor of internal medicine, and Doctor Slavin presented a paper at the meeting of the American Academy of Allergy held in Chicago February 19-24.

National Ambulatory Medical Care Survey

The National Center for Health Statistics in the Department of Health, Education and Welfare, as part of its continuing program to provide data on the health status of the American people, is currently planning the National Ambulatory Medical Care Survey (NAMCS). The purpose of the NAMCS is to collect objective, quantitative information which can be used to describe the types of ambulatory patients seen by physicians, the nature of the patients' problems and the resources for their care. This information is needed by leaders in medicine and related professions for planning and organizing health services, for planning efficient utilization of health facilities and manpower and for determining modifications in medical education.

The survey will involve a national sample of physicians who will be requested to provide data concerning a small number of the ambulatory patients they see. When the NAMCS is in full operation (sometime in 1972), about 3,000 physicians each year will be providing data on an estimated 240,000 ambulatory patient visits. Physicians selected to participate in the survey will provide information concerning a sample of the patients that they see during a two-day period in each of four consecutive calendar quarters. All physicians will be replaced by new sample physicians after participating for four quarters. The types of data the survey will collect include age, sex and medical problems of patients plus treatment prescribed and laboratory tests performed for patients. Of course, all data will be held completely confidential and used only for statistical purposes.

Ambulatory medical care is by far the largest segment of the American health services system in terms of prevalence and volume. Yet, little has been done on a national scale to gather reliable information for use in planning and research. The dearth of information on this subject has led leaders in the medical profession to persuade the National Center for

Health Statistics to undertake the National Ambulatory Medical Care Survey. This information will complement the health data already being obtained by the Center through its ongoing national surveys: the Health Interview Survey, Health Examination Survey and Hospital Discharge Survey. The success of the NAMCS, of course, will depend on the cooperation of practicing physicians who are the major source of ambulatory medical care data.

The American Medical Association and numerous other major medical associations have expressed their support for the NAMCS and have provided advice and consultation in its development. With the cooperation of practicing physicians, the survey will provide very valuable data for documenting the health status of the American people and for informing public and private policy decisions.

Endorsements have been received from the following organizations:

- American Medical Association
- National Medical Association
- American Academy of General Practice
- American Academy of Neurology
- American Academy of Pediatrics
- American Association of Neurological Surgeons
- American College of Physicians
- American College of Preventive Medicine
- American Osteopathic Association
- American Proctologic Society
- American Psychiatric Association
- American Society of Internal Medicine
- American Society of Plastic and Reconstructive Surgeons, Inc.
- American Urologic Association
- Association of American Medical Colleges

Endorsements by the following organizations are under consideration:

- American Academy of Dermatology
- American Academy of Orthopaedic Surgeons
- American College of Obstetricians and Gynecologists
- American College of Surgeons

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WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of child-bearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

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NUCLEAR MEDICINE-RADIATION BIOLOGY FELLOWSHIP—A Fellowship in Nuclear Medicine-Radiation Biology is available at the Little Rock Veterans Hospital: This is a research-oriented program for graduate MD's or dentists who wish to become familiar with the Field of Radiation Research. The training provides experience in general cellular and molecular radiation biology, biometry, computer applications, radiologic physics, etc. The salary for the first year is \$13,000-\$15,000. For information, contact Chief Nuclear Medicine SVC, Veterans Hospital, Little Rock, Arkansas 72201.

FOR SALE—Large general surgical practice, St. Joseph, Missouri (Metrop. area-100,000) including modern furnishings, equipment, files and library; untimely death in prime of life; reasonable price—installments available. Please inquire David H. Morton, Attorney, Corby Building, St. Joseph, Missouri 64501. Collect calls accepted AC 816-232-6787.

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MEDICAL DOCTOR—\$75,000—With or without general practice experience. Minimum of \$40,000 guaranteed with potential in excess of \$75,000. Serve on staff of clinic in "sportsman's paradise" part of the country, a small community in Louisiana which provides real family living. This client assumes all of our search costs. Write in confidence to H. L. Ebe, General Manager, Snelling and Snelling, 302 McDaniel Building, Springfield, Missouri 65806.

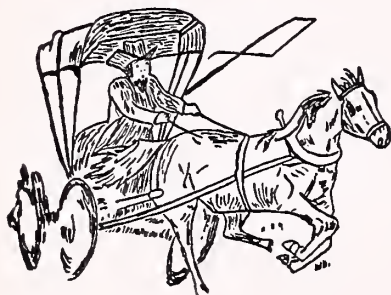
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Missouri Medicine in Review



FORTY YEARS AGO

In Missouri, there were 159 hospitals with 26,078 beds registered by the Council of the American Medical Association. This information was published in the Association's journal of March 28. Of this total, 23 of the institutions with 589 beds were listed as being deficient in some respect, such as inadequacy of laboratory facilities, staff organizations, radiologic service, records, etc. The average daily number of patients in the registered hospitals was 21,141. Twenty-four of the hospitals are approved for general internship and 13 for residency in specialties; 43 have schools of nursing accredited by the State Board of Nurse Examiners.

Since 1909, when the first complete list of hospitals was compiled by the American Medical Association, the number of hospital beds has increased by 127%. In the United States, there are now 664 approved hospitals offering 5,584 internships to the graduates of 76 acceptable medical schools. However, there are 316 teaching hospitals with a bed capacity of 135,548 affiliated with the 76 medical schools for teaching purposes and they make the high quality of the clinical service possible.

For those who wish to pursue some special branch of practice, there are 349 approved hospitals offering 2,069 residencies in various specialties. Approximately two thirds of the physicians in the United States are connected in some way with hospitals. The report shows that 98,491 of the 142,500 physicians in active practice are members of hospital staffs, superintendents, residents or interns.

TWENTY-FIVE YEARS AGO

House Bill No. 206, known as the Doctors' Prefix Bill, becomes law on July 1, 1946. Members are urged to make appropriate changes immediately in their office name plates, stationery, cards, prescription blanks and so forth. The law provides that anyone using the word "Doctor" or "Dr." before his name designate the degree held or the type of practice in which he is engaged. An example would be "John Smith, M.D., Physician and Surgeon" and NOT "Dr. John Smith, Physician and Surgeon." The law applies also to dentists, osteopaths, chiropractors, optometrists or any other person practicing a healing art and using the word "Doctor" or "Dr." before his name.

Howard B. Goodrich, M.D., Hannibal, was elected and installed as President of the Missouri State Medical Association by the House of Delegates at the 88th Annual Session in St. Louis on March 26. Doctor Goodrich has been active in medicine in Missouri since 1926 when he began his practice in Hannibal. He was born in Brooklyn, N. Y. on June 15, 1899, the son of the late Dr. Charles Howard Goodrich, president of the New York State Medical Association in 1937.

TEN YEARS AGO

The unique and highly successful Greater Kansas City Health Fair on March 18-26, 1961 at the Municipal Auditorium will long be remembered as one of the most interesting and well-received health education projects for public consumption ever presented in this area. This great exhibition was the outcome of more than two-years' work by the Jackson and Clay County Medical Societies in Missouri and the Wyandotte and Johnson County Medical Societies in Kansas.

One of four business and professional men honored as outstanding young Missourians by the Missouri Junior Chamber of Commerce was Dr. Robert L. Magee of Eldorado Springs.

A recently-elected director of the Kansas City Rehabilitation Institute is Robert H. Fitzgerald, M.D., Independence, who was presented a certificate for voluntary work in the Institute's amputee clinic.

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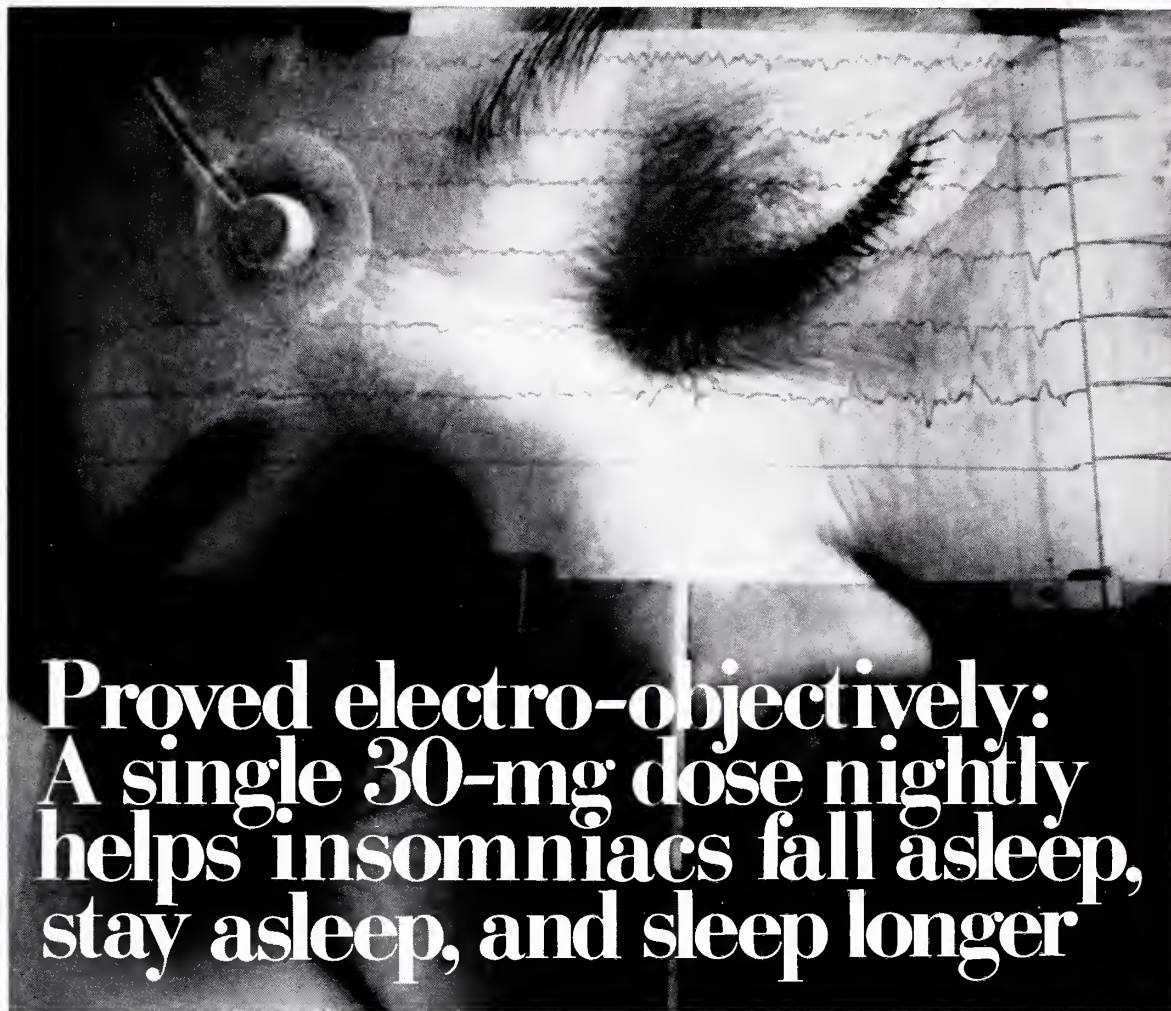
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114th MSMA Annual Session
April 6-9, 1972 **Kansas City**



Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro-oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.^{1,2,3}

Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,¹ Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.

Confirmed clinically

Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

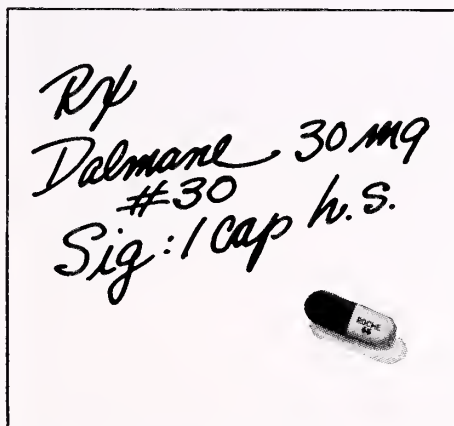
Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

In summary, Dalmane is useful in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. It can be used effectively in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep.

Dalmane (flurazepam HCl) is generally well tolerated

In most instances in which adverse effects with Dalmane were reported, they were mild, infrequent and seldom required discontinuation of the drug. Dizziness, drowsiness, lightheadedness and the like were the side effects most frequently noted, particularly in elderly or debilitated patients.³ Instances of hepatic dysfunction, paradoxical reactions (excitement) and hypotension are rare with Dalmane, and morning hang-over is relatively infrequent. In studies to date the effectiveness of Dalmane for recommended periods of use is maintained without need to increase dosage.

References: 1. Kales, A., et al.: "Effectiveness of Sleep Medications: All-Night EEG Studies of Hypnotic Drugs," in Proc. 7th Internat. Cong. Electroencephal. and Clin. Neurophysiol., San Diego, Calif., Sept. 13-19, 1969. 2. Kales, A., et al.: "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," in Kales, A. (ed): *Sleep: Physiology and Pathology*, Phila., Lippincott, 1969, p. 331. 3. Data on file, Medical Department, Hoffmann-La Roche Inc.



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Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

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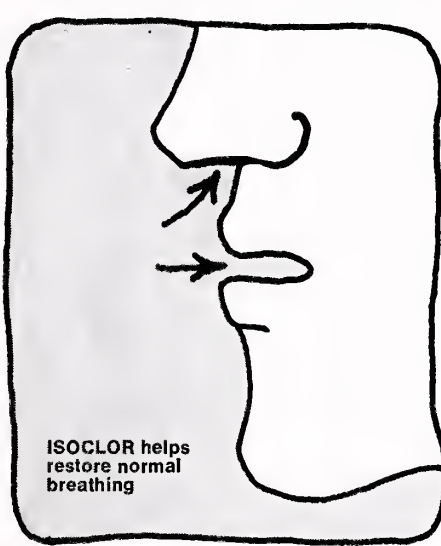
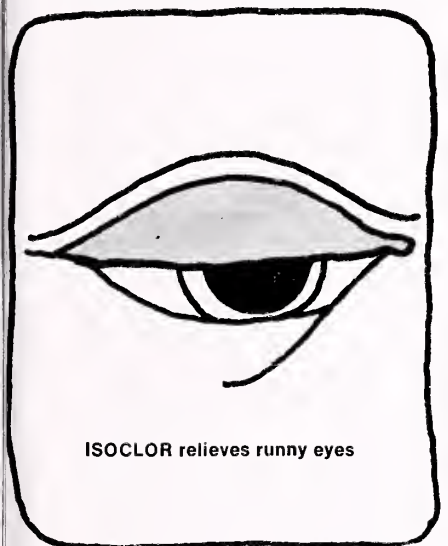
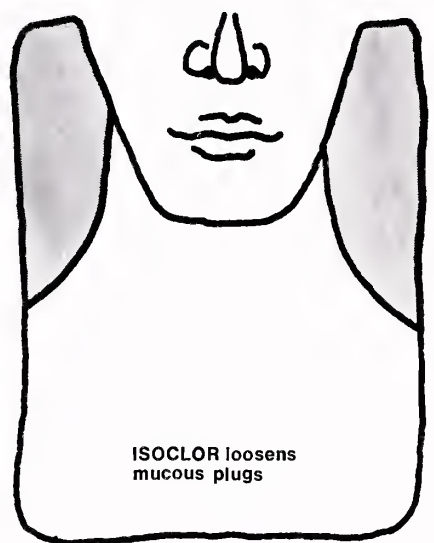
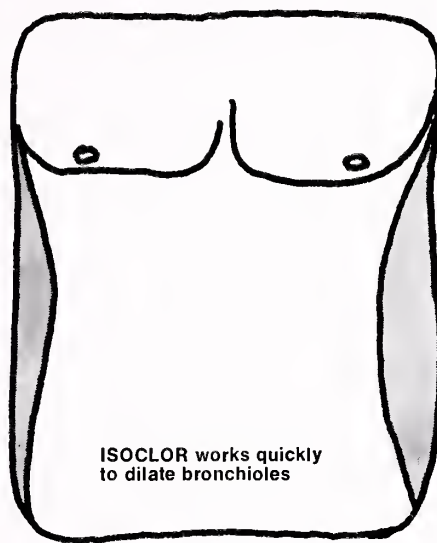
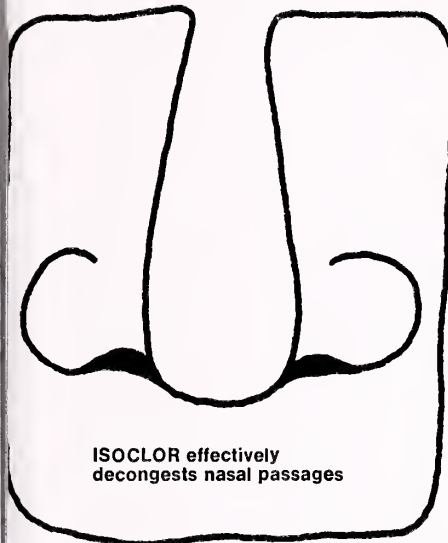
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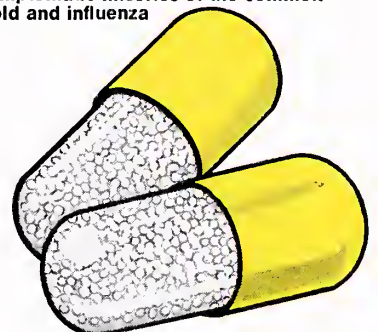
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'Detailing' Medical Data— An Effectiveness Evaluation

Special Article

WHAT ABOUT RHEUMATIC FEVER and rheumatic heart disease in Missouri? Are these two diseases still of sufficient magnitude to remain a public health problem?

In 1962, the professional membership of the Missouri Heart Association was concerned about these questions. As a result, the Rheumatic Fever and Congenital Heart Disease Committee of Missouri Heart Association was charged by the Missouri Heart Association's Board of Directors to look into these problems. At its first meeting, the Committee, which is composed of the following agencies—Missouri Heart Association, Missouri State Medical Association, Missouri Pharmaceutical Association and Missouri Division of Health, was concerned with the fact that there was relatively little knowledge about the extent of rheumatic fever as it exists in Missouri.

The Committee recommended that a study be undertaken to determine the prevalence of rheumatic fever and rheumatic heart disease. The task of implementing this study was directed to the Missouri Division of Health, Section of Chronic Diseases, and the University of Missouri Department of Community Health and Medical Practice with advice and assistance from the Cardiac Study Committee of the Missouri State Medical Association. This study, carried out in 1962, covered the reportable year 1961. As a part of the study, personal letter requests for information were sent to 194 hospitals and 5,410 practicing physicians in Missouri. From information provided by these sources, determination was made that the prevalence rate of rheumatic fever and rheumatic heart disease were of sufficient magnitude to constitute a public health problem. The study was reported in the October, 1965 issue of *MISSOURI MEDICINE* by William C. Allen, M.D. and Stanley L. Silberg, Ph.D.

Statistical data derived from this study

prompted the Rheumatic Fever and Congenital Heart Disease Committee of the Missouri Heart Association to establish the present Missouri Rheumatic Fever Secondary Prevention Program. This program was designed to provide "low cost" prophylaxis for the prevention of recurring or repeated attacks of rheumatic fever and to maintain a central registry with follow-up services for the practicing physician. This program of secondary prevention was coupled with the Fluorescent Antibody technique for identification of beta-hemolytic streptococcal infection, Group A, for the purpose of preventing primary attacks of rheumatic fever. With proper knowledge and application of these programs, medical authorities felt that a marked reduction in the occurrence of rheumatic fever and rheumatic heart disease could be realized.

Various means of disseminating information concerning these programs to Missouri physicians were tried. Letters, speakers at local medical societies, exhibits at state medical meetings and seminars describing the mechanics of each program were among the avenues utilized. "Random personal contacting of physicians by personnel of the Missouri Division of Health sharply increased the utilization of the Fluorescent Antibody technique." Many physicians contacted in this way were not aware of the availability of these programs but were definitely interested in learning more about them and how the programs could be useful to them.

In studying the records of these prevention programs, it became apparent to the Rheumatic Fever and Congenital Heart Disease Committee that adequate participation was definitely lacking. The value or worth of these programs to physician as well as patient had already been proven so the inadequacy of impersonal means of communicating with physicians was thought to be the primary factor in inadequate utilization of the programs.

In the light of information gained through personal Committee observation and through the limited personal "detailing" of physicians by the medical students, the Committee was convinced that extensive, concentrated personal physician contact by an individual, a "Detail Man," should be initiated. This effort would permit an evaluation of the effectiveness of this direct personal-approach method of communication with the physician. This evaluation also would help other voluntary and official health agencies seeking an effective means of communicating with physicians. The Committee further expected the effort to greatly increase the use of the Rheumatic Fever Prevention Programs.

A project proposal with these goals was prepared by the Missouri Heart Association, in cooperation with the State Division of Health, and was submitted to the Missouri Regional Medical Program.

Mr. Watson W. Dersham, Executive Director of the Missouri Heart Association, was to direct the project. Mr. Loyd M. Harmon, State Program Director for the Missouri Heart Association, was named Assistant Project Director. Mr. Donald L. Wilson, former Regional Consultant for the Missouri Heart Association, was appointed as the "Detail Man."

It was estimated that completion of the project would require two years. Three major direct objectives were outlined in the proposal, as follows:

1. To expand the Primary Prevention Program for Rheumatic Fever as a cooperative effort with the Missouri Division of Health, which makes these programs available.
2. To expand the Rheumatic Fever Secondary Prevention Program administered by the Missouri Division of Health.
3. To evaluate the effectiveness of the "Detail Man" approach as applied to making certain pertinent information available in a meaningful, personal and repetitive manner to practicing physicians.

The approach was to employ and thoroughly train a person to detail information about the Rheumatic Fever Prevention Programs to physicians in 106 outstate Missouri counties. Gathering necessary baseline data and outlining the plan of action was the next step. A great deal of time and effort was required to divide Missouri counties into regions and to categorize by specialty all of the 1,300 doctors of medicine and doctors of osteopathy within the regions.

Systematic personal contact of these physi-

Until 1968, efforts to disseminate information about and gain adequate participation of physicians in the important Rheumatic Fever Prevention Programs in Missouri had been relatively ineffective. In September of that year, the "Detail Man" Project was launched. The successful personal contacts with the physicians in the state have resulted in the expansion of the Programs and an increase of 55% in the number of patients now enrolled. The Project also has revealed a more effective method for other voluntary and official health agencies to utilize in communicating with the physicians.

Doctor Loyd is Chairman, Rheumatic Fever and Congenital Heart Disease Committee, Missouri Heart Association; Doctor Meinershagen is Director, Section of Personal Health Services, Missouri Division of Health; and Mr. Wilson is "Detail Man," Missouri Regional Medical Program.

cians by the "Detail Man" was planned. In addition, he was to make second and third calls on some of the physicians to assess the effectiveness of prior visits and to determine what methods are preferred by physicians for receiving professional information or services. Thorough evaluation of the total program was planned as a final step.

Some unanswered questions confronted the "Detail Man" staff as the project began: How will the project representative be received? How much time will be spent waiting to see physicians? What will be the response of physicians to regular routine culturing of questionable cases of strep throat? Will they consider the mechanics of the "low-cost" prophylaxis program worth the effort? These unanswered concerns could be resolved only in the field.

With necessary preliminary records and files completed and the representative thoroughly informed and field-trained, the "Detail Man" Project became operational in mid-September of 1968. The most heavily populated areas of the nine Missouri regions were undertaken first, with the more remote areas following. This detailed, extensive personal calling, involving some 33,000 miles in approximately 18 months and reaching into 106 Missouri counties, was completed by the end of February, 1970.

The first objective of the project was to ex-

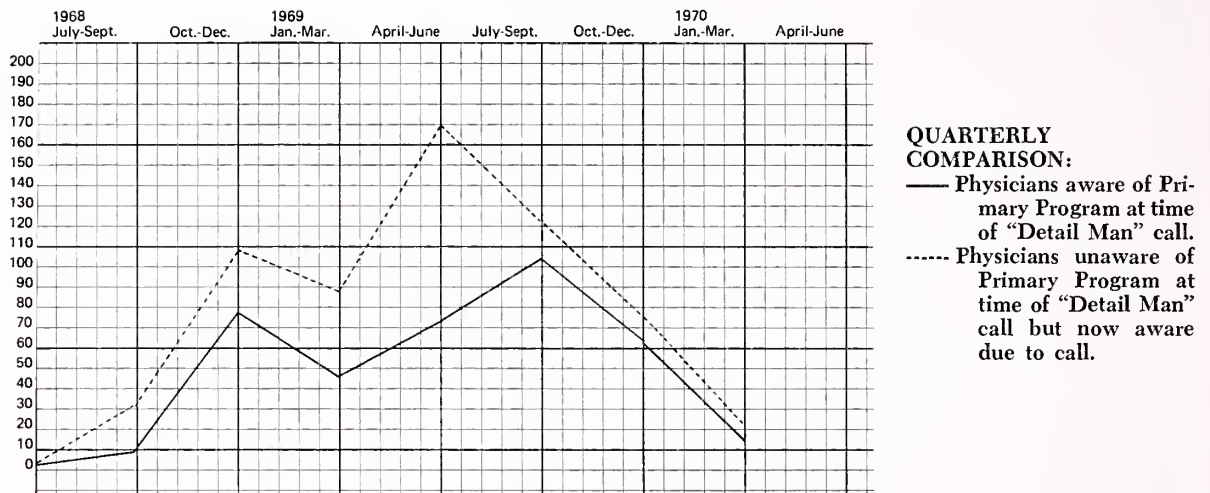


Fig. 1 Rheumatic Fever Primary Prevention Program Graph #1.

pand the Primary Prevention Program for Rheumatic Fever, a free program offered to any practicing medical doctor or doctor of osteopathy in Missouri. The nucleus of this program centers around silica gel, dry swab, nose and throat culture kits for detecting beta-hemolytic streptococcal infection, Group A. The kits do not expire with nonuse nor do they require refrigeration. If a patient with questionable strep throat is seen, the physician can quickly culture the throat with the dry swab provided, place the specimen in the silica gel crystals and seal it in the aluminum foil mailing container. The nurse fills out the record slip and places the container in the mail. When the specimen is delivered to one of the three laboratories of the State Division of Health, a Fluorescent Antibody analysis is performed. A major concern to the physician is the time element. Thirty to 36 hours are required to run the analysis. If a positive reaction is found, the physician is telephoned immediately from the laboratory. This enables him to promptly initiate a vigorous ten-day program of penicillin prophylactic therapy. Negative results are returned to the physician by regular mail. There is no charge to physician or patient for this valuable service.

As of Feb. 28, 1970, 1,006 physicians had been contacted. It is of particular interest that 613 (61%) were unaware of the availability of this service at the time of personal contact and 393 (39%) were aware of the existence of the services (Fig. 1). However, 613 physicians and 99 nurses are now informed and ready to utilize the service when the need arises.

The average time spent by the "Detail Man" waiting to see physicians was eight minutes per

physician and the average time spent with the physicians was approximately nine minutes. Without being informed through personal visit, it is doubtful that knowledge of the primary program would have been communicated. Physicians praised the personal contacts and appreciated getting the information. Many physicians said that the culture kits provide an excellent means of determining chronic carriers of strep throat within a given family. They do provide an accurate, economical method for detecting beta hemolytic streptococcal infection. Many private laboratories indicated that they have used the kits as a standard for verifying the accuracy of other conventional streptococcal detection procedures.

Notable increases in cultures processed have resulted from the personal contact method. In the early years after the development of Fluorescent Antibody technique, cultures processed by the Division of Health Laboratories numbered between 1,000 and 2,000 annually. During the year July, 1969 through June, 1970, the laboratories processed 47,842 cultures. During the period of January through March, 1970, cultures increased 69% over the same period in 1969 (Fig. 2). In some instances, physicians cultured specific cases immediately after the personal call.

The second objective of the project was to expand the Missouri Rheumatic Fever Secondary Prevention Program. This program also is available to practicing physicians and is primarily designed to provide "low-cost" prophylaxis for the prevention of repeated or recurring attacks of rheumatic fever and includes a Rheumatic Fever Registry with follow-up services provided for physicians. Patients are accepted in the "low-

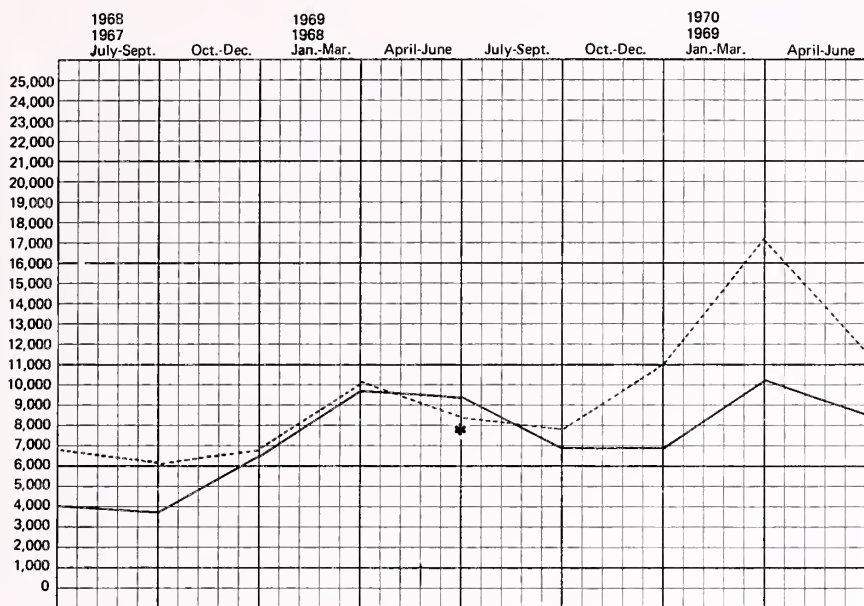


Fig. 2 Rheumatic Fever Primary Prevention Program Graph #2.

**QUARTERLY
COMPARISON:**
Cultures processed at Division of Health Laboratories.
----- 1968-69-70
—— 1967-68-69

*NOTE: Decrease in cultures processed this quarter over those processed in same period in 1968 was due to a large one-time screening effort by the O.E.O. Program in Springfield, Mo.

cost" program only upon application by a physician. A pad of four prescriptions (enough for one year of prophylaxis) is sent to the physician and a prescription for a three-month supply is issued in the usual manner to the patient, who takes the prescription to a participating pharmacy. The pharmacist *does* not fill the prescription from his stock but sends it to the Division of Health for processing. The Division of Health enrolls the patient in the statewide registry and sends the requested drug to the pharmacist. The patient receives the drug from the pharmacist for a nominal fee and takes the medication as prescribed.

Physicians may select from the three medications available under this program:

Oral Buffered Penicillin G., 250,000 units each tablet, two tablets per day

Long-acting injectable penicillin, 1,200,000 units each syringe, monthly

Sulfadiazine, 0.5 gm per tablet, two tablets per day recommended, one per day if patient is under 60 lb.

This is a low-cost program; no free drugs are available.

During the period of the grant, 1,006 physicians had been contacted and informed about this program. Of the total, 700 (70%) were unaware of the availability of the services at the time of contact and 306 (30%) were aware of the existence of the program (Fig. 3).

In effect, seven out of ten physicians seen have been made aware of the details of the pro-

gram by the "Detail Man" and will enroll patients as the need arises. The "low-cost" aspect of the program appears to be an incentive in maintaining continual, uninterrupted prophylactic therapy. During the period of this grant, there has been an increase of 204 patients (Fig. 4) and 63 physicians (Fig. 5) enrolling patients in the secondary program. This increase applies to the counties visited by the "Detail Man." A total of 1,194 patients has been placed in the state registry.

The "Detail Man" called on some 234 pharmacists to discuss involvement in the overall secondary procedure. This has helped to resolve some misunderstandings about the program.

The "Detail Man" presented the Rheumatic Fever Prevention Programs to graduating seniors of Kirksville College of Osteopathy and Surgery in Kirksville, Mo. These new physicians, who are soon to offer their medical services throughout the country, now have knowledge of the mechanics of both programs to use or to initiate prevention programs in areas where no similar service exists.

The third objective of the project was to evaluate the effectiveness of the "Detail Man" in communicating information about important medical services directly to physicians. Second calls were made on 20% of the physicians and third calls were made on 10% of those contacted twice. The recalls were made to determine how many calls were necessary to effectively communicate the information. It was found that when information or services that physicians

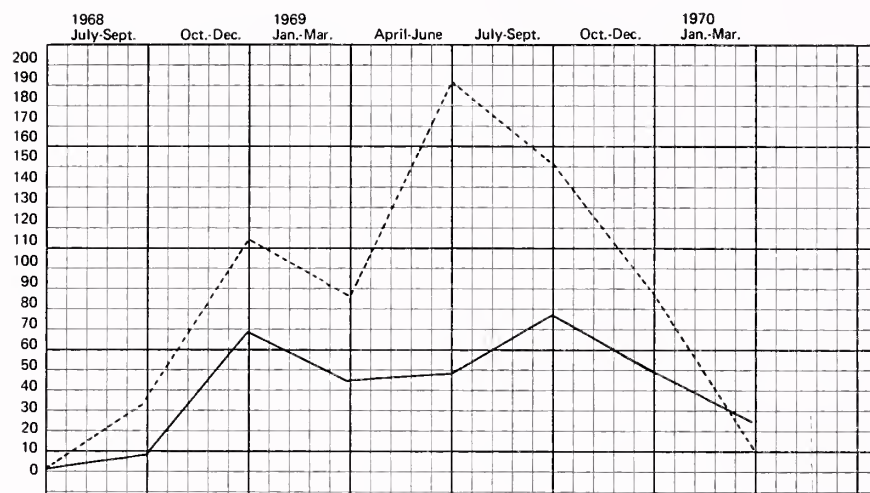


Fig. 3 Rheumatic Fever Secondary Prevention Program Graph #1.

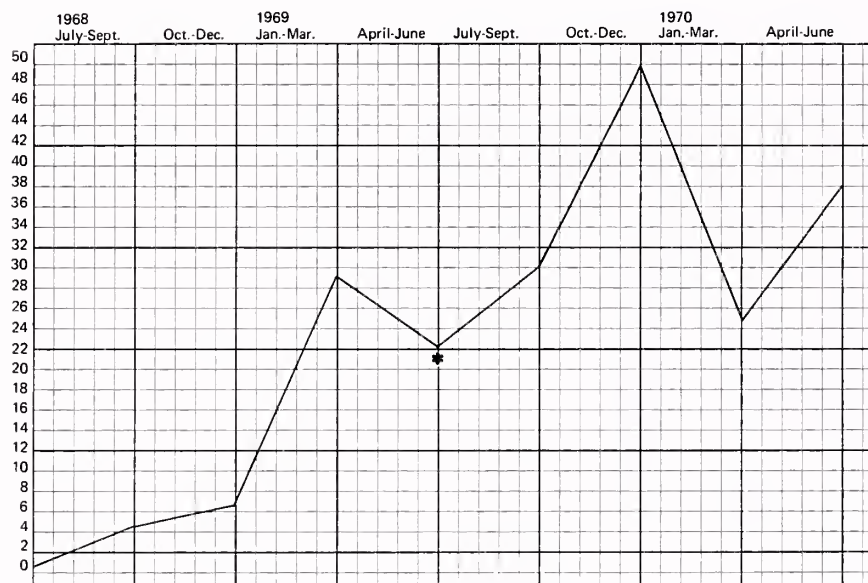


Fig. 4 Rheumatic Fever Secondary Prevention Program Graph #2.

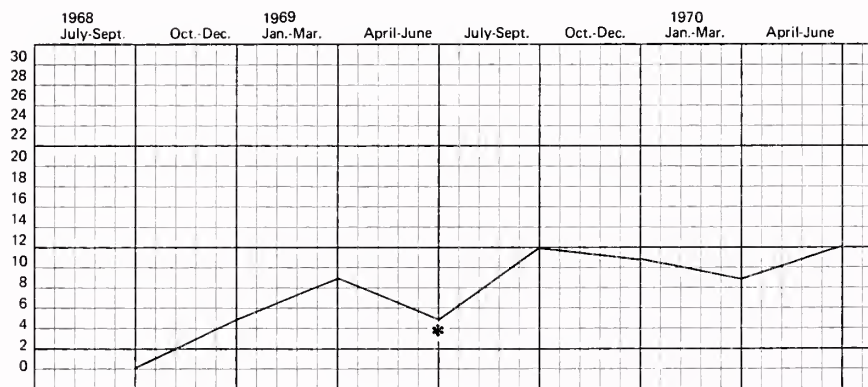


Fig. 5 Rheumatic Fever Secondary Prevention Program Graph #3.

QUARTERLY COMPARISON:

- Physicians aware of Secondary Program at time of "Detail Man" call.
- - - - - Physicians unaware of Secondary Program at time of "Detail Man" call but now aware due to call.

— Quarterly report of new patients added to the Secondary Rheumatic Fever Registry. Grand Total 204.

*NOTE: Decline in number of patients added to registry during this quarter due to "Detail Man" making recall visits and not contacting new physicians.

— Quarterly report of new physicians added, who in turn have enrolled Rheumatic Fever patients on the registry. Grand total 63.

*NOTE: Decline in the number of physicians adding patients to the registry during this quarter due to "Detail Man" making recall visits and not contacting new physicians.

consider valuable are offered, only one call is necessary.

In making recalls to 70 physicians, it was discovered that 33 (47%) had had occasion to culture questionable cases and were pleased with the service, especially with the speed with which the culturing and reporting were accomplished. Only three did not favor the "Detail Man" approach. Ninety-six percent of the physicians seen on recall said that they rely on "Detail Man" contacts. Also, 97% indicated that they would like to be personally contacted periodically by a representative of the Missouri Regional Medical Program. In general, physicians were most cooperative in receiving the "Detail Man" for second visits.

Those physicians contacted on recall indicated their preferred means of receiving professional information is as follows: 49 selected personal visitation, 15 preferred personal contact at medical meetings, four liked direct mail and one each preferred telelecture and publication in the *Missouri Family Doctor*.

The effectiveness of the "Detail Man" approach is seen in increased participation in both the Primary and Secondary Rheumatic Fever Prevention Programs. As a result of personal contacts with physicians and pharmacists, the following changes were noted:

1. A sizeable increase in the number of silica gel nose and throat kits processed through the three Missouri Division of Health Laboratories.
2. An increase in the total number of rheumatic fever patients enrolled in the statewide registry, and an increase in the number of Missouri physicians enrolling patients.
3. More efficient operation of the Rheumatic Fever Secondary Program.
4. In general, an improvement in the quality of health care with respect to rheumatic fever, resulting from informing 1,006 physicians and 99 office nurses, who were spoken to when the physician was out of office.
5. In addition, assistance has been rendered to the physician in other areas. The following topics were discussed, to name only a few:

Vocational Rehabilitation

Penicillin Sensitivity Tests

Better communication between the University of Missouri Medical Center and outlying practicing physicians

Diabetes Testing

Veneral Disease

Immunization for Typhoid and Tetanus

Legal procedures for committing a tuberculous patient

Information concerning diagnosis in heart catheterization on patient

Admission procedures at Mid-Missouri Mental Health Center

Publications or periodicals on communicable diseases

Financial assistance for indigent patients

Availability of Missouri Regional Medical Program speakers for medical meetings

Teaching of Toxicology at the University of Missouri

Questions concerning Division of Health Biological Immunizations

Having electrocardiograms read

Availability of laboratory tests through the Missouri State Highway Patrol concerning drugs and narcotics

Technical questions concerning the central laboratory at the State Division of Health

Obtaining professional diagnostic material from the Missouri Heart Association.

Information concerning the establishment of stroke center

Admission procedures at the University of Missouri Medical Center

Postgraduate study and courses for academic credit in Heart Disease and other areas

The establishment of a county health service

Referral procedures concerning local hepatitis epidemic

Questions concerning INH medication for patients showing positive tuberculin reaction

The "Detail Man" relayed these questions to appropriate individuals or agencies and obtained answers.

The evidence indicates that personal, direct communication with the practicing physicians, either individually in the physician's office or collectively at medical meetings, is the most effective means of disseminating professional information or services. A very acceptable percentage of physicians initiated action as a result of the direct personal contact. The project staff concluded that personal contact could provide the primary means of liaison between health or government agencies and the persons with whom they must communicate. Perhaps medical teaching institutions also could use the method effectively to gain cooperation in programs or activities that warrant extensive participation. Personal contact with physicians provides direct feedback about the effectiveness of programs and gives the physician opportunity to comment on the programs and services available to him.

Precision is a natural goal when you prescribe thyroid replacement therapy.

When you prescribe Proloid (thyroglobulin) you specify a precision blend of the two natural active hormones— T_4 and T_3 —in their natural protein, *thyroglobulin*.

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91 control tests, 2 clinical assays: Beginning with the USP iodine assay and continuing through chromato-

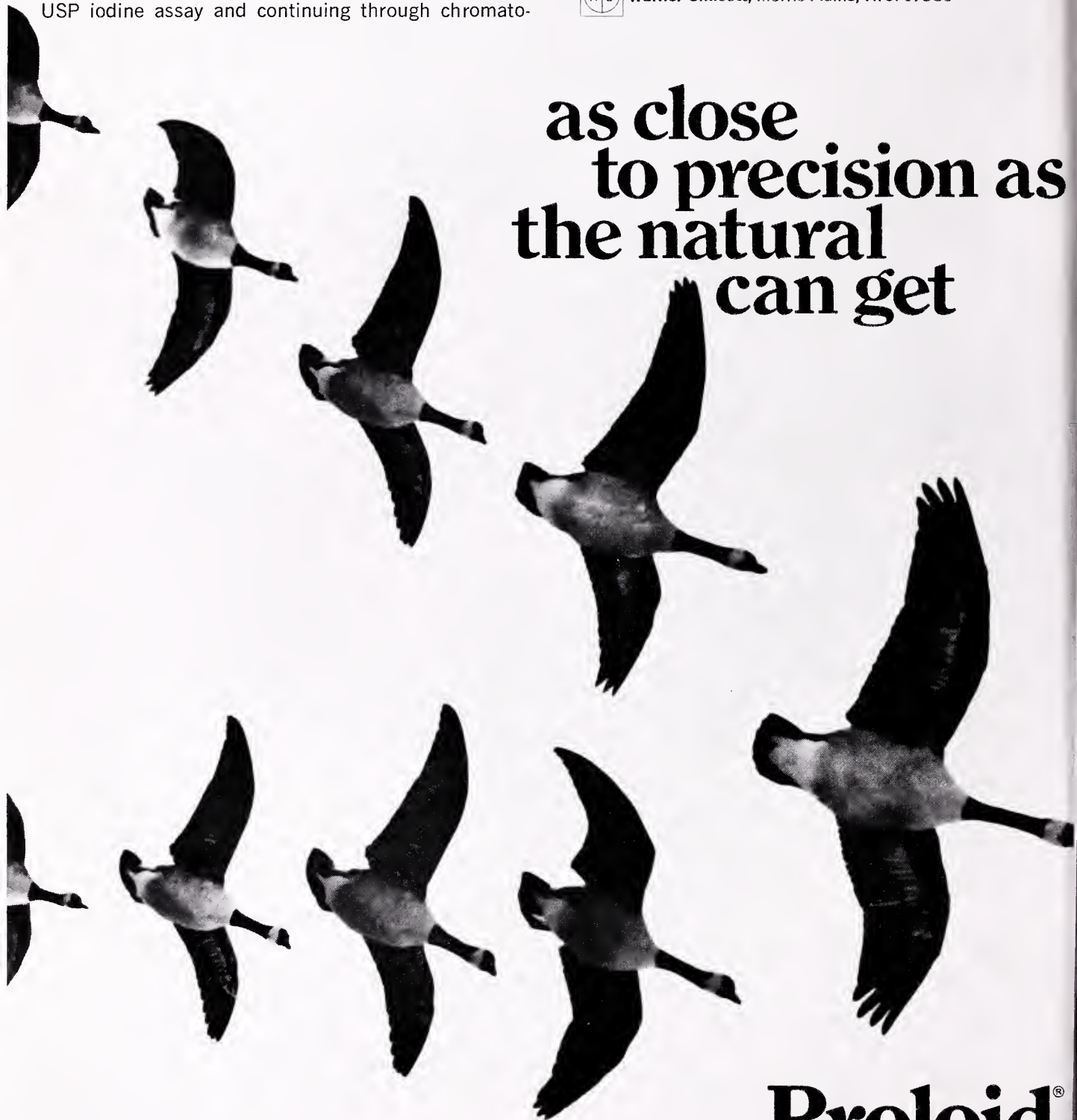
graphic analysis for T_4 and T_3 content and including testing in hypothyroid humans—Proloid is made as precise as the natural product can get, batch after batch.

New 2 grain tablet: Precision extends to dosage. With the introduction of a new 2 grain tablet, titration can be even more conveniently achieved with the full range of Proloid dosages: $\frac{1}{4}$, $\frac{1}{2}$, 1, $1\frac{1}{2}$, the new 2, 3, and 5 grain tablets.



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can get



Proloid[®]
(thyroglobulin)

the natural for precision

Proloid® (thyroglobulin)

Description: Proloid (thyroglobulin) is obtained from a purified extract of frozen hog thyroid. It contains the known calorigenically active components, sodium levothyroxine (T_4) and sodium liothyronine (T_3). Proloid (thyroglobulin) conforms to the primary USP specifications for desiccated thyroid—for iodine based on chemical assay—and is also biologically assayed and standardized in animals.

Chromatographic analysis to standardize the sodium levothyroxine and sodium liothyronine content of Proloid (thyroglobulin) is routinely employed.

The ratio of T_4 and T_3 in Proloid (thyroglobulin) is approximately 2.5 to 1.

Proloid (thyroglobulin) is stable when stored at usual room temperature.

Indications: Proloid (thyroglobulin) is thyroid replacement therapy for conditions of inadequate endogenous thyroid production: e.g., cretinism and myxedema. Replacement therapy will be effective only in manifestations of hypothyroidism.

In simple (nontoxic) goiter, Proloid (thyroglobulin) may be tried therapeutically, in non-emergency situations, in an attempt to reduce the size of such goiters.

Contraindication: Thyroid preparations are contraindicated in the presence of uncorrected adrenal insufficiency.

Warnings: Thyroglobulin should not be used in the presence of cardiovascular disease unless thyroid-replacement therapy is clearly indicated. If the latter exists, low doses should be instituted beginning at 0.5 to 1.0 grain (32 to 64 mg) and increased by the same amount in increments at two-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid, and dosage should be started at a very low level and increased gradually.

Precaution: As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131} I resin sponge uptake, T_3 ^{131} I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Instructions for Use: The following conversion table lists the approximate equivalents of other thyroid preparations to Proloid (thyroglobulin) when changing medication from desiccated thyroid, T_4 (sodium levothyroxine), T_3 (sodium liothyronine), or T_4/T_3 (liotrix).

Dose of Proloid (thyroglobulin)	Dose of desiccated thyroid	Dose of T_4 (sodium levothyroxine)	Dose of T_3 (sodium liothyronine)	Dose of liotrix (T_4/T_3)
1 grain	1 grain	0.1 mg	25 mcg	±1 (60 mcg/15 mcg)
2 grains	2 grains	0.2 mg	50 mcg	±2 (120 mcg/30 mcg)
3 grains	3 grains	0.3 mg	75 mcg	±3 (180 mcg/45 mcg)
4 grains	4 grains	0.4 mg	100 mcg	
5 grains	5 grains	0.5 mg	125 mcg	

In changing from Thyroid USP to Proloid (thyroglobulin), substitute the equivalent dose of Proloid (thyroglobulin). Each patient may still require fine adjustment of dosage because the equivalents are only estimates.

Overdosage Symptoms: Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

How Supplied: $\frac{1}{4}$ grain; $\frac{1}{2}$ grain; scored 1 grain; $1\frac{1}{2}$ grain; 3 grain; and scored 5 grain tablets, in bottles of 100 & 1000; and scored 2 grain tablets in bottles of 100.

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This method provides an excellent, direct assistance to patients, as well as to physicians.

Progress of the "Detail Man" Project has been followed with a great deal of interest by the American Heart Association and has been widely publicized in its publication, *Heart and Torch*, which has recommended that affiliates examine this approach as a possible means of improving agency-physician communications. State governmental agencies also have expressed interest. Further information may be obtained by writing the "Detail Man" Project, Missouri Heart Association, 601 E. Broadway, Columbia, Mo. 65201.

SUMMARY

The "Detail Man" Project, with three specific objectives, has been carried out. The Rheumatic Fever Prevention Programs in the state of Missouri have been enhanced and expanded as a direct result of personal physician contact throughout all regions of the state. The effectiveness of personal, direct physician contact is documented in the statistical records of the Missouri Division of Health. Since the project became operational, there has been an increase of 55% in the number of patients enrolled in the Rheumatic Fever Secondary Prevention Program. The total number of cultures processed for detecting "strep throat" has been significantly increased.

The "Detail Man" Project has shown that the majority of physicians rely on detail men to keep them abreast of constantly changing medical techniques and innovations. Numerous requests for information were received and answered as a result of "Detail Man" contacts. Improved public relations between agencies and physicians can be achieved and maintained through the interest and effort of "Detail Man" visits.



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Woman's Auxiliary Attracts State Groups To Workshop on Missouri's Environment

A Workshop on Missouri's Environment, sponsored by the Woman's Auxiliary to the Missouri State Medical Association, attracted the attention and attendance of representatives of ten state women's organizations and eight state or regional agencies who are vitally concerned with solving the environmental problems in Missouri.

The workshop, which was held at Ramada Inn in Columbia on May 11, resulted from a resolution passed by the MSMA House of Delegates at the 1970 Annual Session which asked that the Auxiliary "do something" about environmental health in the state and assist the MSMA in implementing activities to alert citizens to the seriousness of the problems involved and their possible solutions.

Spearheaded by Mrs. William M. Walker, President of the State Auxiliary in 1970-1971, and Mrs. Marshall T. Metzgar, Chairman of the Auxiliary's Committee on Environmental Health, the five-member committee invested 1,750 hours in developing a program that would gain the cooperation of other women's organizations who are aware of the need to protect the environment and to coordinate efforts to avoid duplication.

A highlight of the committee's work was the production of a "package program" packet which is now available to all women's organizations in

the state. The packet contains special information on water, conservation, air, population, noise and solid waste problems with bibliographies, lists of speakers, fact sheets, action guidelines and suggested group activities.

The package program was distributed to organizations represented at the meeting. It was developed with the assistance of Dr. Joye Patterson, Research Associate, University of Missouri Environmental Health Services; Mr. Bill Young and personnel of the University's Extension Division; the University's Environmental Health Surveillance Center; and the Missouri State Medical Association.

The basic subjects of the package program were discussed in depth by a panel of authorities moderated by Mr. John M. Rademacher, Interim Regional Coordinator, Environmental Protection Agency.

Panel participants and their subjects were Miss Peggy J. Keilholz, Administrative Assistant, Missouri Water Pollution Board (water); Mr. Robert M. Robinson, Chief of General Sanitation, Missouri Division of Health (solid waste); Mr. Homer Bolen, Coordinator of Instruction, Missouri Department of Education (education); Mr. Michael T. Marshall, Chief of Enforcement, Missouri Air Conservation Commission (air); Mr. Clarence E. Billings, Superintendent of Education, Missouri Department of Conservation (conservation); and Dr. Edgar R. Chasteen, Associate Professor of Sociology, William Jewell College (population).

Mr. Jack D. McCall, Area Environmental Health Specialist, University of Missouri Extension Service, summarized the panelists' presentations. He stated that the "basic issue is not taking things seriously" and emphasized that "we need a commitment to the life we live . . . where man and animal can live together."

Mrs. Robert F. G. Spier of Columbia, representative of the Missouri League of Women Voters, explained "Environmental Legislation in Missouri." "How Our Organizations CAN Work Together" was discussed by Mr. Bill Young, Environmental Health Specialist, University of Missouri Cooperative Extension Service.

In his closing remarks, Mr. Young said, "It is important that this meeting has happened. We are a vested-interest group because we are here." He suggested that the state organizational leadership invited to the workshop represented approximately 200,000 people. He added, "Within

But, General, Sir —

POLLUTION IS EVERYBODY'S BUSINESS!



This cartoon by Mort Walker appears on the cover page of the "Environmental Health Package Program" packet developed by the Woman's Auxiliary to the MSMA.

this room, I believe there is the potential to solve Missouri's environmental problems."

In his estimate, Mr. Young included the 93,000 Girl Scouts in Missouri. Miss Marjorie Vance, Program Specialist for Region V of Girl Scouts of America, had stated that the Scouts would be available to assist in implementing programs.

Women's organizations represented at the workshop included The Missouri Federation of Business and Professional Women's Clubs, Inc., Missouri Federation of Women's Clubs, Inc., Jaycee Wives of Missouri, Girl Scouts of the United States of America, Mid-Continent Council of Girl Scouts, Missouri League of Women Voters, Women's Chamber of Commerce of Metropolitan St. Louis, Women's Chamber of Commerce of Springfield, Missouri Nurses Association and the Junior League of St. Louis.

Observers included Arthur W. Neilson, M.D., Chairman of the MSMA Committee on Environmental Health, and Mr. Lewis A. Young, Area Representative, Environmental Protection Agency.

Mrs. James N. Haddock, newly-appointed chairman of the Auxiliary's Committee on Environmental Health for 1971-1972, participated in the workshop along with Mrs. Walker; Mrs. Metzgar; Mrs. Frank J. Valaeh, President of the MSMA Woman's Auxiliary; Mrs. Keith D. Jones, President-Elect of the Auxiliary; and members of the Boone County Medical Society Auxiliary.

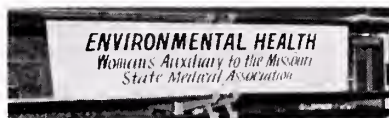
Members of the Auxiliary Environmental Health Committee are Mrs. George P. Wilson, Mrs. G. W. N. Eggers, Jr., Mrs. Milo J. Spurgeon and Mrs. Hugh S. Harris, Jr., all of Columbia.

In referring to the Auxiliary's package program, Mrs. Metzgar said that it is aimed at the housewife as consumer and mother and educator of the young. "The packet contains information. We've eliminated excess statistical or scientific data. We're giving facts and recommendations for action."

Mrs. Metzgar added, "The hope for our environmental problems is in educating youth. I think it will be difficult to educate adults to the fact there is a problem or to make them appreciate how serious it is."

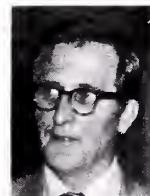
She said that the Missouri Federation of Women's Clubs, with a membership of 14,000, became the first organization to adopt the package and, in this conjunction, inaugurated a statewide project on environment on April 22.

As a possible incentive to the women's organizations involved, the suggestion was made by panelists that "we tend to think that since we are a democratic government, the majority of people make the decisions," yet "changes are made by 10% of the people."



"The state is not living up to its responsibilities."

JOHN M. RADEMACHER
Environmental Protection Agency



"We have to make hard choices . . . what freedoms are we willing to give up?"

DR. EDGAR R. CHASTEEN
William Jewell College

"Waste has been described as resources out of place. Let's put them back in place!"

MISS PEGGY J. KEILHOLZ
Missouri Water Pollution Board

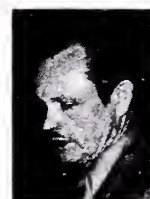


"It is important that this meeting has happened!"

BILL YOUNG
University of Missouri
Cooperative Extension Service

"The Mississippi River has been called the colon of Mid-America!"

CLARENCE E. BILLINGS
Missouri Department of Conservation



"We're giving facts and recommendations for action!"

MRS. MARSHALL T. METZGAR
Chairman, Committee on Environmental Health, MSMA Woman's Auxiliary

"Perhaps we should join forces as a Women's Organization for Environment!"

MRS. WILLIAM M. WALKER
Immediate Past-President
MSMA Woman's Auxiliary



AMA Convention to Be Held in Atlantic City

The 120th annual convention of the American Medical Association will be held on June 20-24 at Atlantic City.

Some 32,500 physicians, medical students, nurses, allied medical professionals, industrial and scientific exhibitors and guests are expected to attend.

The scientific program and exhibits will center at Atlantic City Convention Hall, while the AMA's policy-making body, the House of Delegates, will be in session at the Chalfonte-Haddon Hall Hotel.

Wesley W. Hall, M.D. of Reno, Nev. will take office as the new President of the AMA, succeeding Walter E. Bornemeier, M.D., of Chicago. A new President-Elect, to take office in June, 1972, will be elected by the House.

Each of the 23 major scientific sections will conduct scientific programs.

The program will include hundreds of lectures, panel discussions and symposia, scientific and industrial exhibits, daily showings of more than 30 new medical motion pictures, demonstrations of various diagnostic and treatment techniques and many other facets designed to

help the busy physician keep abreast of the latest advances in medical care.

Two "Seminars in Depth"—on trauma and on intensive coronary care—will provide information a physician would normally receive at post-graduate courses. The intensive sessions will compress this information into day-long meetings, both on Wednesday, June 23.

This schedule leaves time for practitioners interested in these important topics to take in other parts of the five-day scientific meeting, the most comprehensive clinical medicine meeting in the world.

There also will be sessions on abortion, drug abuse, medicine and religion, emergency medical care transplantation, management of headache, oral drugs for diabetes, venereal disease treatment, medical aspects of the prisoner-of-war mercy mission, clinical nutrition, treatment of rheumatoid arthritis and "The Physician and Women's Liberation."

The Woman's Auxiliary of the AMA also will hold its annual convention in Atlantic City on June 18-24 at the Traymore Hotel. Mrs. G. Prentiss Lee will take office as the new president, succeeding Mrs. R. C. L. Robertson.

Missouri Academy of Psychiatry Elects Officers

Roy Wilson, M.D., Springfield, was elected President of the Missouri Academy of Psychiatry at the organization's annual meeting on April 16 at the Chase-Park Plaza Hotel in St. Louis.

The meeting was held in conjunction with the Annual Session of the Missouri State Medical Association.

Dr. Henry V. Guhleman, Jr. of Jefferson City, Clinical Professor of Psychiatry at the University of Missouri-Columbia, was elected president-elect and Dr. James Vaughan of Kansas City was elected secretary-treasurer.

Councilors named at the meeting are Dr. David Davis, Professor of Psychiatry, University of Missouri-Columbia, and Dr. Maarten Nieuwenhuizen, Assistant Professor of Psychiatry at UMC and superintendent of the Mid-Missouri Mental Health Center.

Members elevated to fellowship status included Drs. Edmund V. Cowdry, St. Louis; David Davis; Edwin F. Gildea, St. Louis; Henry V. Guhleman; James N. Haddock, St. Louis; Robert R. Knowles, St. Louis; George J. Lytton, Kansas

City; Philip J. Mareo, Associate Professor of Psychiatry, UMC; Maarten Nieuwenhuizen; Retus W. Osborn, Farmington; Eli Robins, St. Louis; George Ulctt, St. Louis; James M. A. Weiss, Professor and Chairman, Department of Psychiatry, UMC; and Charles B. Wilkinson, Kansas City.

Honorary fellowships were awarded to Dr. Lloyd J. Thompson, Chapel Hill, N. C., who received a B.S. in Medicine degree from the University of Missouri in 1917, and Dr. Jack H. Mendelson, Professor and Chairman of the Department of Psychiatry, Harvard Medical School, Boston, who was principal speaker at the meeting.

"Drinking, Drugs, Dropping Out and Dissent" was the topic of an afternoon panel discussion, moderated by Doctor Davis, retiring president of the Academy. Panelists included Doctor Mendelson; Doctor Knowles, director of the State Alcoholism and Drug Abuse program; and Dr. Donald Goodwin, Assistant Professor of Psychiatry, Washington University, St. Louis.

Mrs. Frank J. Valach Elected President of Woman's Auxiliary

Mrs. Frank J. Valach, Creve Coeur, was elected President of the Woman's Auxiliary to the Missouri State Medical Association at its annual meeting at the Chase-Park Plaza Hotel in St. Louis on April 15-17.

Other Woman's Auxiliary officers for 1971-1972 are Mrs. Keith D. Jones, Warrensburg, President-Elect; Mrs. Charles E. Nickson, Jr., Kansas City, First Vice-President; Mrs. J. Otto Lottes, St. Louis, Second Vice-President; Mrs. Charles R. Willman, St. Joseph, Third Vice-President; Mrs. James Gordon, Jefferson City, Fourth Vice-President; Mrs. George J. Lytton, Kansas City, Recording Secretary; Mrs. Raymond J. Bozzo, Washington, Treasurer; Mrs. John K. Holcomb, Cape Girardeau, Auditor; Mrs. Ozgoncu Kamuran, Creve Coeur, Corresponding Secretary; and Mrs. John W. Deyton, Webster Groves, Editor of *Missouri Doctor's Wife*.

Mrs. Valach, whose monthly message to members of the MSMA will appear regularly in *MISSOURI MEDICINE*, was born in Chicago, Ill. In 1945, she entered nurses' training at St. Anne's Hospital in Chicago and became a graduate nurse in 1948 with two years' college credits from Loyola University. She was Head Nurse of the Emergency Room at St. Anne's Hospital for two years. She also served as Head Nurse in the Blood Bank Donor Department, University of Pennsylvania Hospital.

After serving as President of the St. Louis County Medical Auxiliary in 1966-1967, Mrs. Valach became Chairman of the International Health Committee and the Doctor's Day Committee of the Woman's Auxiliary to the MSMA. As President-Elect of the State Auxiliary, she was appointed to the Reading Committee and served as Chairman of Delegates and Alternates at the AMA Woman's Auxiliary's national convention in Chicago.

Her participation in community affairs includes service on the Board of Directors of the American Cancer Society as Memorials Chairman and as Secretary. Last year, she was the Creve Coeur Chairman for the Cancer Crusade. She belongs to Friends of St. Louis City Hospital School for Nursing, the Ruth Kelso Renfrow Art Club and a Tuesday Literary Club.

Mrs. Valach shares her husband's love of travelling and flying in their own plane. She is the proud recipient of a Certificate of Achievement which she acquired by completing the Pinch Hitters Course offered by the Aircraft Owners Pilots Association for wives of fliers.

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WASHINGTON

The speaker of the American Medical Association's House of Delegates has warned against exaggerated claims that national health insurance is the total answer to the nation's health care problems.

Testifying before the Senate Finance Committee, Russell B. Roth, M.D., Erie, Pa., said the medical profession as represented by the AMA is "concerned by the over-promise which seems inherent in a wide variety of legislative proposals placing strong reliance on a restructuring" of the health care delivery system in this country.

"We caution against the attractive but totally impractical notion that one legislative act can solve the problems (as to health care) of a profoundly troubled society," he said.

"We commend to you our specific proposal (Medicredit), for attacking financial barriers. We also solicit your support in ongoing efforts to augment manpower, to improve practice patterns, to apply effective measures to moderate and contain costs, to meet the challenges of the inner-city and the rural scene and, in general, to meet the goal that no one shall be deprived of the best health care that is within our power to provide."

"Those of us who are in group practice, and there are over 40,000 of us, have our own concepts of its advantages to our patients and to us," Dr. Roth said. "But few of us look upon group practice as a panacea. The notion has been advanced that the AMA opposes salaries for physicians and champions direct fee-for-service alone. This would come as news to our large number of member-physicians who derive their income in whole or in part from salary. It is a false premise. Upon it is based the allegation that fee-for-service favors overtreatment and prepayment does not. One might as logically assert that prepayment favors undertreatment. Actually, a good and conscientious physician responds with consistency to the needs of his patients as he sees them.

"One hears over and over the statistical studies to show reduced utilization rates under prepayment. But less prominence is given to other studies such as that by the Russell Sage Foundation which concluded that nearly half of all

members of the Health Insurance Plan of Greater New York and also of the Labor-Health Institute go outside of the plan for some medical service. It is not our aim to downgrade prepaid practice. Many physicians, as well as many patients, like it. Under the Kaiser plan, only some 15% of beneficiaries who have opted into prepayment coverage, opt out of it later on. But mark you, they do have an option.

"It is implicit in our defense of a pluralistic flexible system, that prepaid group practice and such modifications of it as may be devised under the title of health maintenance organizations should have their opportunity to demonstrate their capacities to provide effective, efficient and economical care. Any freeze into a single mold would deprive our nation of the benefits of competition and comparison. Here, legislative mandate can do more harm than good.

"In a somewhat similar vein of caution, we would note that there is danger in expecting too much of professional services review or peer review. To attempt to legislate it into effective being may be a frustrating experience. The frustration stems from the fact that when the question concerns the appropriateness of technical, medical care and the equity of charges for it, only another physician can pass the judgment. This is a fact which is forcing upon physicians the obligation to evaluate the practices of their colleagues. Large segments of the medical profession take substantial pride in their accomplishments in this respect.

"In applying the principles of peer review, the reviewing group seeks to uphold quality, to promote efficiency and to eliminate departures from accepted practices and equitable charges. By and large, practicing physicians accept the necessity for checks and balances in the paying out of public funds and private funds as well. On the other hand, they have no appetite for the job to be done by nonmedical persons or agencies ill-equipped to judge. This is why they are willing to redouble their efforts within their professional organizations to do the job well. We know of no successful efforts to legislate ethics or morals, which must be at the heart of any system of competent, conscientious delivery

of medical care. On the other hand, we know of no profession which has shown a better motivation or performance through its collective professional organizations to rule out abuses and lack of competence. It is of paramount importance to support the progress which has been made, not to cast it aside.

"We also would caution against uncritical acceptance of the statement that it is somehow possible to legislate American medicine into a system of 'health care' as opposed to 'sickness' care. The great advances in adding to life expectancy have been achieved in world medicine by controlling epidemics and plagues, draining swamps, purifying water and devising immunizations. Smaller gains have been made in individual physician-patient encounters, removing diseased organs, supporting failing hearts, controlling diabetes and the like. Few gains, indeed, have been made or can be made through changing the role of the physician in respect to well

patients, not that there is any shortage in things to be done, especially in the realm of public education. Nutrition can be vastly improved, cigarette smoking can be cured, drug addiction and alcoholism somehow must be abated, proper exercise may be promoted, accident prevention is essential, environmental deterioration must be reversed. But how many of these things can be done by the individual physician, besieged as he is by those who are or think they are already sick?

"The things that are to be done are the province of our public health organizations, voluntary health agencies, communications media, government, and our professional educational associations such as the AMA. All physicians practice some degree of preventive medicine. Many could do more. But to believe that some sort of basic restructuring of medical practices could yield great dividends in this respect is wishful, impractical thinking."

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Notes of interest from Here

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Medical writers and reporters from across the nation visited the offices of **Dr. B. J. Bass** in Salem recently to see the "Automated Physician Assistant" program being put to practical use by Doctor Bass and his staff. Doctor Bass was selected by the Missouri Regional Medical Program to evaluate a battery of highly-automated devices developed to reduce the amount of work and free the physician to use his technical skills more effectively. The devices link Doctor Bass's office with an IBM computer in the College of Engineering at the University of Missouri-Columbia. The computer speeds the analysis of test information and aids in his diagnosis. Stories describing the experiment in detail have appeared in major newspapers, *Medical World News* and *American Medical News*.

The world-renown **Singing Doctors** of the Greene County Medical Society will appear before the AMA House of Delegates in Atlantic City, N. J. on June 20. Appearances in May were before the Kansas State Medical Association in Topeka and at the Georgia State Medical Association Annual Meeting. Members of the Singing Doctors include **Drs. Harold Lurie, F. T. H'Doubler, Jr., Charles Lockhart, James Brown, Don Gose and Fred Collier.**

A crowd of approximately 1,000 persons attended ceremonies honoring **Dr. George H. Wood** in Carthage in April. The ceremonies marked the official dedication of Wood Avenue, a new street named in Doctor Wood's honor. Also, **Sen. Richard Webster** presented a plaque to Doctor Wood commemorating his 40 years of service to the community and a state flag that flew over the Capitol in Jefferson City in Doctor Wood's honor as authorized by the Missouri Senate.

Two St. Louis otolaryngologists participated in the seventh annual scientific meeting of the American Academy of Facial Plastic and Reconstructive Surgery on May 23-25 in San Francisco. They are **Dr. Mark May**, assistant professor, and **Dr. Joseph H. Ogura**, professor and head of the Department of Otolaryngology, Washington University School of Medicine.

Dr. Paul Revare, Kansas City, has been elected president and **Dr. M. D. Durnell**, Lee's Summit, has been elected president-elect of the Kansas City Academy of General Practice. Other officers for the coming year are **Dr. Albert D. Eshelman**, treasurer and **Dr. James D. Dunleavy**, secretary.



NEW ASSOCIATION OFFICERS — MSMA President Gerald L. Miller, M.D., Kansas City, is flanked by officers of the Association, left to right, John I. Matthews, M.D., Jefferson City, secretary; E. A. Stricker, M.D., St. James, Council Chairman; Walter T. Gunn, M.D., St. Louis, President-elect; and Charles R. Gulick, St. Louis, treasurer.

Legislative Session Will End on June 15

Missouri's General Assembly moved into the final four weeks of the 1971 session with the fate of much legislation still in doubt.

As of May 17 the Missouri Senate said that all bills which had not been passed as of adjournment day, June 15, would be placed on the table and for all intent and purpose be dead for next year's session. The House, moving in the other direction, voted to give its Speaker the final say on all legislation under its control as of June 15. The controversy stemmed from the annual session amendment to the Missouri Constitution adopted by Missouri voters last year.

The following is the status of legislation of interest to the medical profession as of May 17.

Senate Bill 7, which provides that transactions involving transfusion of blood and transplantation of organs are a service, is on the House Calendar of third reading of Senate Bills not far from final debate. It has passed the Senate.

Senate Bill 9 and House Bill 301 both would require that those applying for membership on county hospital staffs must provide

written information concerning training and qualifications and accept the board of the hospital as governing body. Both bills are in good shape for passage. Senate Bill 9 has passed the Senate and is on the House Calendar of Senate Bills for third reading. House Bill 301 has passed the House and is on the Senate Calendar of House Bills for third reading. If one passes, then the other will be stricken from the calendar.

House Committee Substitute for House Bill 79 is on the House informal calendar of bills for perfection. The bill would make

changes in the chiropractic practice act by allowing chiropractors to perform physiotherapy using physiotherapy devices.

House Bill 73 which permits minors to receive medical treatment without parental consent in cases involving venereal disease, pregnancy and drug abuse has been passed and sent to the Governor.

House Bill 238, which reduces the alcohol level in the blood to indicate intoxication, still awaits House action on the Perfection Calendar.

House Bill 785, a broad consent for medical procedures law, is also on the House Perfection Calendar.

House Committee Substitute for House Bill 95, which would change the statute of limitations in malpractice cases, has been assigned to the Senate Public Health Committee. No hearing has been scheduled.

House Bill 274, which would provide state aid for Missouri students in private medical and osteopathic schools, was defeated on a 78-79 vote on third reading in the

(Continued on back of page)

MSMA
News

DR. BENOIT CANDIDATE FOR AMA COUNCIL

Hector W. Benoit, Jr., M.D., Kansas City, one of Missouri's delegates to the American Medical Association House of Delegates, has been nominated by the AMA Board of Trustees for membership on the Council on Medical Service. Dr. Benoit will be opposed for the vacancy by C. Willard Camalier, Jr., M.D., Washington, D.C. The incumbent, Charles J. Ashworth, M.D., of Rhode Island is not eligible for re-election.

The Missouri State Medical Association is actively working for the candidacy of Dr. Benoit.

Missouri's candidate for the Council on Medical Service is the chairman of the Health Care Foundation of Missouri's Board of Directors and is a past president of the Missouri State Medical Association. He is a member of the standing committee on Health Care Financing of the AMA Council on Medical Service.

The election will take place during the AMA Convention in Atlantic City.

General Assembly (Continued)

House. It would have taken 82 votes to pass the measure.

House Bill 147 which would license psychologists under the Board of Registration for the Healing Arts has been perfected by the House.

House Committee Substitute for House Bills 336, 579 and 727 which add rubella, rubeola and mumps to the list of immunization requirements for school attendance has been perfected by the House and gone to the Economics Committee due to a fiscal note. An amendment was added on perfection which made immunization mandatory.

A Senate Committee Substitute for House Committee Substitute for House Bill 69 awaits action on the



CHANGE OF COMMAND - Joseph L. Fisher, M.D., St. Joseph, left, is shown here congratulating his successor as President of the Missouri State Medical Association, Gerald L. Miller, M.D., Kansas City, at the annual MSMA banquet on April 17 in St. Louis.

Deadline Is Extended

The Federal Bureau of Narcotics and Dangerous Drugs has extended the deadline for the use of physician registration numbers under the Controlled Substance Act to July 29 of this year.

In a telegram to all medical associations, the BNDD announced that despite the fact that the law went into effect on May 1 that physicians who have applied for registration but who have not received their BNDD numbers may continue to practice without inter-

ruption by indicating "Federal registration applied for on (date)." After July 29, the bureau said, "no activity with controlled substances will be permitted without use of a valid BNDD registration number."

A spokesman for the Federal Agency said that nothing in this policy relieves any potential registrant from the responsibility to immediately apply for registration if he has not already done so.

Senate Calendar of House Bills for third reading. The bill is one of a series of measures tightening the laws concerning drug abuse.



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Two to four weeks constitutes a typical course of Efudex therapy. The response is usually characteristic and predictable. After three or four days of treatment, erythema begins to appear in the area of keratoses. This is followed by an intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of the inflammatory reaction generally occurs two weeks after the start of therapy, and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. A mild erythema may remain for two or three months before gradually receding. Since this response is so predictable, lesions which do not respond should be biopsied.

Two strengths—two dosage forms

Efudex is available as a 2% or 5% solution or as a 5% cream. It is applied twice daily by the patient with a nonmetal applicator or suitable glove.

Before prescribing Efudex, however, two important considerations: First, please consult the complete prescribing information for precautions, warnings

and adverse reactions. Second, advise the patient that treated lesions should respond with the characteristic but transient inflammation. A positive sign that Efudex is working for them.

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Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

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J. JOSEPH MARR, M.D., *St. Louis*

Recent Developments in the Treatment of Infectious Diseases

Part II. Alternatives to Penicillin in the Treatment of Infections Caused by Gram-positive Organisms

THE PHYSICIAN has at his disposal a wide variety of antimicrobial agents useful in the treatment of infections caused by Gram-positive organisms. In most of these infections, penicillin-G is the drug of choice; however, there are many instances in which penicillin cannot be used because of resistance on the part of the organism or because of allergy on the part of the patient. In the former situation, a semi-synthetic penicillin frequently will be of value; in the latter circumstance, the macrolide antibiotics, vancomycin or lincomycin and its derivatives might be used. Because of the number of agents and their variations in mechanisms of action, side effects and dosage, they will be presented as chemically related groups of drugs and discussed in that manner.

THE PENICILLINS

These agents have been in use clinically for the past 30 years and remain among the most effective and least toxic of all the available antimicrobial agents. If a choice exists between penicillin and an alternate drug, the former should always be used. A major drawback is the rapid renal excretion of these compounds, although in

urinary tract infections, this property may be used to advantage since high serum levels rapidly produce even higher urine concentrations. The various preparations of penicillins are obtained by chemical or biological modifications of the 6-aminopenicillanic acid nucleus. Although there are many possible variations on this molecule, only the most widely used will be described here.

The first preparation to exhibit activity against Gram-negative organisms was ampicillin. It has the advantage of being excreted in the bile in high concentrations and subject to enterohepatic recirculation. It is well absorbed when given orally and its ultimate excretion is through the kidney. These properties make it a useful agent in both urinary tract and biliary tract infections. This drug is susceptible to staphylococcal penicillinase and, therefore, is not indicated when infection by these organisms is under consideration. It is, however, effective against *H. influenza*, *Proteus mirabilis*, *Salmonella*, *Shigella* and most *E. coli*. It generally is not used against Gram-positive organisms since penicillin-G and penicillin-V are cheaper and more effective.

Carbenicillin has been released recently for clinical use. It has an antibacterial spectrum similar to that described for ampicillin. This drug is mentioned here only to exclude its use in infections due to Gram-positive organisms. However, as described previously,¹ it is effective against *Pseudomonas aeruginosa* and some strains of *Proteus* resistant to ampicillin, and it should be restricted to the treatment of infections due to these organisms.

Methicillin, the prototype of the penicillinase-resistant penicillins, was first used clinically to halt the epidemic spread of virulent penicillinase-producing staphylococci in hospitals in 1959.²⁻⁴ Methicillin still remains an excellent agent against the penicillinase-forming staphylococcus because of its high stability to the enzyme.⁵ Despite this, its activity, which is surprisingly low, is only about 1% that of penicillin-G. Moreover, the drug is a good inducer of the enzyme and has only a fraction of the activity of penicillin-G against nonpenicillinase-producing staphylococci and other Gram-positive cocci. Therefore, methicillin is of value *only* against penicillinase-producing staphylococci, and infection by these organisms is the sole indication for its use. The practice of giving methicillin along with penicillin-G in infections due to Gram-positive cocci cannot be recommended. The former provides only a small additive effect and may result in the induction of a penicillinase in organisms which have only small amounts of the enzyme to begin with.

If the clinical situation indicates that infection by one of several Gram-positive cocci is a possibility, e.g., orbital cellulitis, and that resistant staphylococci may be among the potential invaders, then one of the isoxazolyl penicillins or nafcillin should be used (see below). As with any of the penicillinase-resistant drugs, if subsequent testing indicates that the organism does not produce penicillinase, administration of the drug should be discontinued and penicillin-G substituted. This is becoming of increasing importance since methicillin resistance has appeared and is increasing in frequency in this country. Minimum dosage of 1 gm IM q4h or 1 gm diluted in 50 ml of sterile saline injected IV over five minutes q4h is recommended. Larger doses may be needed for the treatment of severe infections, such as endocarditis.

Allergic reactions to methicillin occur with a frequency similar to that of reactions to penicillin-G. Cross-sensitivity to the latter should be anticipated; this drug should not be used in persons known to be allergic to the penicillins.

Idiosyncratic reactions are unusual, but a few cases of agranulocytosis have been reported.⁶ Agranulocytosis due to methicillin is not a contraindication to the use of the other semisynthetic penicillins.

The isoxazolyl penicillins (oxacillin, cloxacillin, dieloxacillin) and nafcillin have been a significant addition to the therapeutic armamentarium. However, it is emphasized that these drugs are not for indiscriminate use and should be withheld unless one is treating an infection caused by a penicillinase-producing staphylococcus or when the probability exists that the infecting organism will produce this enzyme. The common feature of this group of agents is the presence of a bulky, electron-attracting substituent on the side chain of the 6-aminopenicillanic acid nucleus. These additions decrease the susceptibility of the penicillin to hydrolysis by penicillinase, presumably through steric hindrance at the site of attachment to the enzyme. This group of drugs is acid-stable and, thereby, enjoys the advantage of oral administration.

Despite numerous claims, no preparation appears to have clear advantages over another against penicillin-resistant staphylococci. The advantage of these agents over methicillin lies in their effectiveness against Gram-positive organisms other than staphylococci. They are perhaps ten to 20 times more active than methicillin although somewhat more toxic and less stable to the action of penicillinase.

Oxacillin should be given on an empty stomach since its absorption is very unpredictable otherwise. When taken properly, about 60% is absorbed and peak serum levels are attained in one hour. Intramuscular injection provides serum levels twice those obtained by the oral route with a great deal more certainty. This drug is excreted in the bile as well as in the urine, as are the rest of the semisynthetic penicillins. Since enteric absorption is somewhat erratic, oxacillin should always be used parenterally when serious infection is to be treated. Transaminase elevations and cholestatic jaundice have been reported.

Cloxacillin, the chlorophenyl analogue of oxacillin, is essentially identical in its therapeutic dimensions to the parent compound. It does offer the distinct advantage of uniform absorption from the intestine with higher peak serum levels and a more sustained action than oxacillin. Therefore, it is to be preferred when oral therapy is used.

Nafcillin is about equivalent to cloxacillin in its therapeutic efficacy. Some workers⁷ believe

that nafcillin is somewhat superior to the other semisynthetic penicillins in the treatment of infection caused by Gram-positive cocci other than the penicillinase-producing staphylococci. However, oral absorption is erratic and the parenteral route is to be preferred.

A final comment regarding the above semisynthetic agents: their use should always be restricted to infections caused by penicillinase-producing staphylococci or in instances when infection with these organisms is a possibility but infection by other Gram-positive cocci also must be considered. In the latter case, one of the isoxazolyl penicillins or nafcillin should be used in preference to methicillin. Methicillin should be used only after isolation of the organism and sensitivity testing have indicated that it is a penicillinase-producing staphylococcus sensitive to the drug. Use of this drug against other Gram-positive cocci will give poor therapeutic results.

CEPHALOSPORINS

Agents belonging to this group are derivatives of 7-aminocephalosporanic acid and are quite comparable to the extended spectrum penicillins. They are not broad spectrum antibiotics and should not be used as such. Their superiority to the penicillins lies in the fact that they are resistant to hydrolysis by penicillinases, except when the enzymes are present in high concentrations, and that they may be used in individuals known to be allergic to penicillin. Since these drugs were first introduced in 1964, a considerable amount of clinical experience has accumulated to document their effectiveness in the treatment of a variety of infectious processes.

The antigen which produces anaphylactic reactions to penicillin is associated with the opening of the beta-lactam ring of the 6-aminopenicillanic acid nucleus. However, the hydrolysis of this moiety in the cephalosporins results in fragmentation of the molecule. Thus, cross-sensitivity does not occur to a great extent. There is, nevertheless, about a 10% to 20% incidence of cross-reactivity so that cephalosporins cannot be considered a uniformly safe substitute for penicillin.

These agents have a definite place in the treatment of infection caused by penicillinase-producing staphylococci, *Klebsiella* infections, and in treating persons known to be allergic to penicillin. The antistaphylococcal activity of the cephalosporins is comparable to that obtained with the penicillinase-resistant penicillins.⁸ They probably should not be considered as the drugs

Special Series

MISSOURI MEDICINE is privileged to publish this series of articles on recently released antibiotics and the newer approaches to therapy of infectious diseases.

In the accompanying article, particular emphasis is given to vancomycin which is emerging as a useful agent in treating penicillinase-producing staphylococci and in enterococcal infections.

Dr. Marr is Assistant Professor in the Department of Internal Medicine, Washington University School of Medicine, and is with the University's Unit I Medical Service at St. Louis City Hospital. He recently was engaged in rewriting the "Antimicrobial Agents and Infectious Diseases" section of the *Manual of Medical Therapeutics*, which is published by Little, Brown and Co. and is distributed nationally.

Dr. Marr's third article will present a discussion of the therapy of bacterial and tuberculous meningitis.

of choice for infections other than the above. For most infections, penicillin and ampicillin are more effective, are less expensive and remain the drugs of choice.

Cephalothin is not absorbed orally; 4 gm-12 gm per day in divided doses must be given parenterally. For mild infections, 1 gm every four to six hours is adequate. Larger quantities are required for infections due to Gram-negative organisms, such as *Klebsiella*. *Pseudomonas* organisms are generally resistant to cephalosporins. For intravenous infusion, the drug is dissolved in about 30 ml of 5% dextrose or isotonic saline and given over a 30-minute period. Ninety-five percent of the drug is excreted in the urine in about six hours and it is distributed in all body fluids, although it does not cross normal meninges. Serum concentrations are enhanced by probenecid.

The pharmacologic and therapeutic properties of cephaloridine are similar to those of cephalothin. The drug is excreted by the kidney and has been shown to cause renal tubular damage which appears to be cumulative and dose related. It is apparently secreted by tubular transport mechanisms which are not required for cephalothin excretion. Quantities of more than 4 gm per day should be avoided.

Cephaloglycine represents an attempt to combine the side chain of ampicillin with the nucleus of a cephalothin in order to gain the advantage of both drugs. Cephaloglycine has the additional advantage of oral administration. It shows promise in treatment of urinary tract infections and was described previously.¹ Although very high concentrations are achieved in the urine, serum levels are generally low; therefore, this drug cannot be recommended for use in systemic infections.

Toxic reactions to cephalothins include the development of a positive Coombs' test, rarely with hemolytic anemia (this is a dose dependent phenomenon). Reversible renal tubular necrosis has been described with cephaloridine, usually in doses in excess of 4 gm a day. Pain and sterile abscesses at injection sites have been described with cephalothin; cephaloridine appears to be much less irritating in this regard.

MACROLIDE ANTIBIOTICS AND LINCOMYCIN

These two groups are quite distinct chemically, although similar in their pharmacologic and therapeutic properties. All of these agents are active against Gram-positive cocci and their principal usage should be restricted to treatment of infections caused by these organisms. They have been generally considered to be bacteriostatic by virtue of inhibiting protein synthesis, although in higher concentrations they are bacteriocidal.⁹ Of the macrolide antibiotics, erythromycin has been more extensively studied and more widely used than has either oleandomycin or triacetyloleandomycin. This is due to the earlier appearance of erythromycin as well as its demonstrable superiority over the other macrolides in the treatment of infections caused by Gram-positive bacteria. Resistance to erythromycin is due to enzyme induction, and it extends to oleandomycin and to lincomycin.

Both groups of drugs are widely distributed in the body and give high tissue concentration; however, they do not cross normal or even inflamed meninges to any great extent. Excretion is about 20% in the urine with the remainder in the bile. Side effects of erythromycin are uncommon and relatively minor; abdominal pain, nausea, vomiting and diarrhea are the reactions seen most frequently and occur in approximately 2% of those taking the drug. Gastroenteritis is seen with all of the macrolides and lincomycin, but, perhaps is less prevalent with the latter. Although the macrolides are effective against some *Neisseriae*, *Listeria* and *rickettsiae*, lincomycin is not.

Of about 35 known macrolides, only erythromycin and oleandomycin are used to any great extent. Only the former will be described since it is less toxic and more effective on a weight basis. It is seldom the agent of choice in bacterial infections unless the infecting organism is resistant to penicillin or the patient is allergic to penicillin and the infection is not severe enough to require parenteral therapy. If an oral agent is to be used in the treatment of a mild Gram-positive infection, erythromycin might be preferred to penicillin since it appears to cause less gastrointestinal irritation. Inasmuch as high tissue concentrations may be achieved with low toxicity, erythromycin is also a good agent for therapy of infections caused by wall-deficient organisms. This is true for Gram-negative wall-deficient variants since an intact cell wall appears to be responsible for the resistance of these organisms to the macrolides.

Two oral preparations are available: propionyl erythromycin lauryl sulfate (erythromycin estolate) and erythromycin stearate. Erythromycin estolate produces higher and more reliable blood levels than the stearate. However, the estolate preparations (Ilosone, Lilly) have been associated with a reversible cholestatic hepatitis. When this occurs, it is usually in patients who have received the drug for more than ten to 14 days.^{10, 11} This form of hepatitis may actually mimic an acute abdominal crisis. The syndrome will usually resolve on withdrawal of the drug. The consensus at this time appears to be that the hepatitis represents an idiosyncratic reaction to the lauryl sulfate moiety and is not a dose related toxic effect. During the past seven years, there have been only about 200 cases reported.

The same reaction has followed the use of oleandomycin esters. No toxic reactions of significance have been associated with the erythromycin base. The small possibility of a reversible cholestatic hepatitis is probably outweighed by the greater reliability of absorption of erythromycin estolate. Therefore, the drug should not be avoided because of possible idiosyncratic reactions. Although the use of erythromycin is declining due to the availability of penicillin-G and synthetic penicillins, it appears to retain significant value in therapy of chronic bronchitis and pneumonia caused by *Mycoplasma pneumoniae*. This organism is sensitive to both erythromycin (0.125 µg per ml) and the tetracyclines (1.5 µg per ml). A study by Rasch and Mogabgab,¹² in which 105 cases of atypical pneumonia were treated alternately with erythromycin and tetracycline, indicated that radiographic

improvement occurred somewhat more rapidly with erythromycin than with the latter. No other significant differences in the clinical course were noted.

Lincomycin is an antibiotic with a structural configuration different from that of other antimicrobial agents. Like the macrolides, it inhibits bacterial growth by interfering with protein synthesis. Its antimicrobial spectrum is relatively narrow, resembling that of erythromycin, and it is active in a concentration of about 2 μ g-5 μ g per ml or less. Like erythromycin, lincomycin is bacteriostatic; however, bacteriocidal levels may be obtained at concentrations about 30 times those required to produce bacteriostasis. About 20%-35% of an oral dose of lincomycin is absorbed from the gastrointestinal tract in the fasting state. The administration of 500 mg by this route produces an average peak plasma value of about 2 μ g-5 μ g per ml. Antibiotic activity reaches its height at two to eight hours and is still present at 12 hours. Oral administration following meals reduces serum levels by about 50%.¹³ Lincomycin is diluted in the body through a volume approaching the total weight. Although it does not penetrate the blood brain barrier to any significant degree in patients with normal meninges, in the presence of meningitis cerebrospinal fluid concentrations may be as much as 40% of plasma levels.

In essence, the drug is pharmacologically and therapeutically the same as erythromycin. It offers no particular advantages with a possible exception that it may produce higher concentrations in bone and, therefore, be of use in osteomyelitis. However, despite the fact that there has been a considerable amount of investigation of lincomycin with regard to its ability to penetrate bone the results remain somewhat conflicting. It is clear that this antibiotic will penetrate bone perhaps to a greater extent than even penicillin, but it is not yet certain that the drug is any more effective at the site of the osteomyelitis than are lower concentrations of penicillin.

Clindamycin, the 7-chloro analogue of lincomycin, appears to offer no substantial advantages over the latter.

VANCOMYCIN

This is a bacteriocidal agent active only against Gram-positive cocci. Its only clinical application at this time appears to be in the treatment of severe infections due to methicillin-resistant staphylococci and perhaps enterococci. Resistance to the drug is not a problem at this time. Vancomycin is not absorbed from the alimentary

tract and causes pain and necrosis when given intramuscularly. Administration is, therefore, always intravenous and over a five-minute period. One gram every 12 hours will give adequate blood levels against most staphylococci. It does not enter the cerebrospinal fluid or bile; about 90% is excreted in the urine.

Azotemia is, therefore, a relative contraindication to its use; vancomycin should not be employed in patients who have recently been exposed to other ototoxic or nephrotoxic agents. A clinical use to which vancomycin is particularly well suited is the treatment of staphylococcal enterocolitis. Since the drug is not absorbed, 0.5 gm in water or juice every six hours will give favorable results. Vancomycin also is finding increasing use in severe infections caused by methicillin-resistant staphylococci. At this writing, it is the only effective bacteriocidal agent against the methicillin-resistant staphylococcus. Other work has shown that vancomycin may be an acceptable alternate to penicillin and streptomycin in the treatment of endocarditis caused by the enterococcus.¹⁴ The number of patients treated thus far is small, however, and final judgment must be withheld until more experience has been accumulated. Synergism of vancomycin and streptomycin has been demonstrated *in vivo*¹⁵ and this combination may ultimately be of value in persons unable to tolerate penicillin, although the toxicity of the combination probably will be high.

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Cutaneous Manifestations of Disorders of Metabolism of Phenylalanine-Tyrosine

PHENYLALANINE AND TYROSINE are two closely related amino acids. Phenylalanine is one of the essential amino acids, however, while tyrosine is synthesized in the body by hydroxylation of phenylalanine.

In addition to being incorporated into the proteins, these amino acids also participate in the synthesis of other important substances, such as epinephrine, norepinephrine, melanin and thyroxine.¹

First the amino acid, phenylalanine, is hydroxylated irreversibly to tyrosine. Tyrosine then undergoes a series of reactions to melanin, epinephrine, norepinephrine, thyroxine and through homogentisic acid to fumaric acid and acetoacetic acid¹ (Fig. 1).

Abnormalities in the metabolism of phenylalanine and tyrosine cause certain hereditary diseases. This paper presents a discussion of cutaneous manifestations of these disorders.²

ALBINISM

Albinism is caused by deficiency of tyrosinase,

an enzyme essential to formation and synthesis of melanin granules.

This hereditary disease is characterized by a decreased amount or an absence of melanin in the skin, hair and eyes (Figs. 2 & 3) and by marked photophobia. It is found not only in man, but also in fish, amphibians, reptiles, birds and animals.^{3, 4}

Different types of albinism have different modes of transmission. For instance, oculocutaneous albinism is an autosomal recessive,⁵ ocular albinism is sex-linked⁶ and cutaneous albinism is dominant.⁷

Hypopigmentation, but not complete depigmentation, is the main feature of cutaneous manifestations of this disease (Fig. 3). Wrinkling, precancerous keratosis (Fig. 2), squamous and basal cell carcinoma also are not uncommon. The iris in patients with albinism does not possess normal color. It is light gray in albino infants. As patients grow older, however, the iris changes to blue-gray and becomes translucent.⁸ In addition to changes in the color of the iris, choroid

METABOLISM OF AMINO ACIDS PHENYLALANINE AND TYROSINE

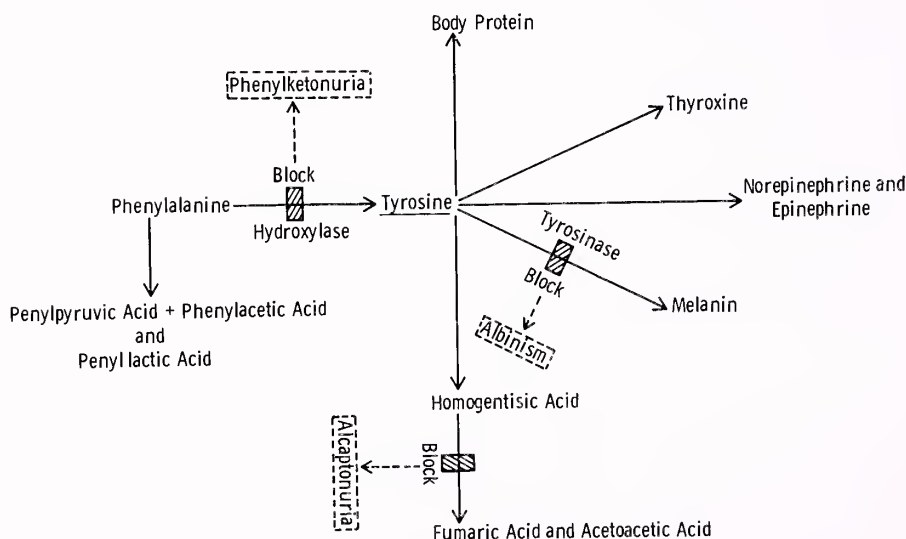


Fig. 1

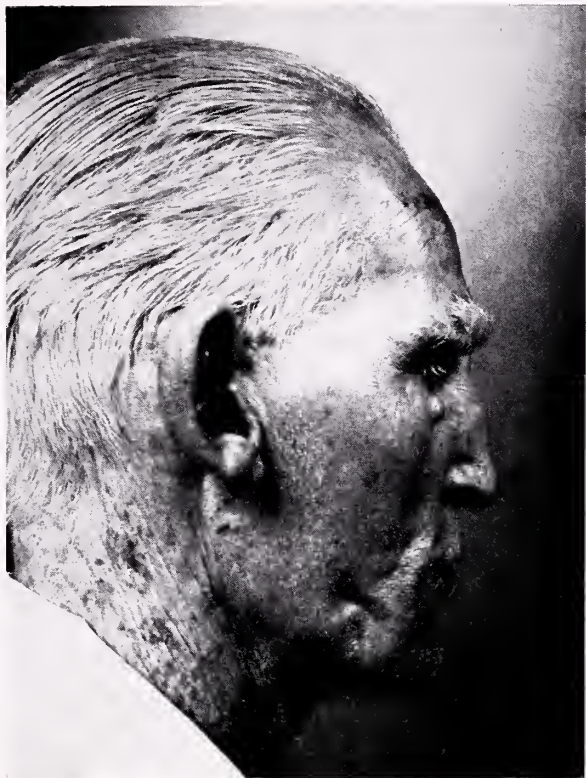


Fig. 2 Hypopigmentation of skin and hair and actinic changes of skin of neck in patients with albinism.



Fig. 3 Hypopigmentation of skin and marked eye changes and photophobia in patients with albinism.

protected from damage by sunshine with one of the systemic or topical sun-screening agents.

PHENYLALANINE

The second disease associated with disturbances in phenylalanine-tyrosine metabolism is phenylketonuria or phenylalanine oligophrenia. This disease, which must be recognized in early infancy to prevent many serious complications, can be associated with mental deficiency and rarely with inability to walk, incontinence, tremor, seizures, spina bifida, intraventricular heart block, hypogenitalism, acrocyanosis, hypersegmented neutrophils, decreased galactose tolerance test,⁹ muscular hypertonicity, microcephaly and electroencephalogram abnormalities.

Skin manifestations are interesting and useful in suspecting phenylketonuria at an early stage. Deficiency of synthesis of melanin granules is manifested by lack of pigmentation of skin, hair and eyes, resulting in blond hair and blue eyes.^{12, 13} Dry and rough skin are other manifestations⁹ and eczema can be troublesome. In a series, 19% of the patients had dermatitis.¹⁰ A characteristic musty or mousey odor of the sweat in these patients is very annoying and is due to secretion of phenylalanine by sweat glands.⁹ Photosensitivity is present, perhaps because of

and retinal pigment layers also lack normal melanin pigmentation. Strabismus, horizontal nystagmus, subnormal visual acuity, absence of sphincter muscle, partial aniridia, absence of the pupillary membrane, atrophy of the disc and coloboma of mesodermal tissue of iris^{9, 10} could be manifestations of ocular or oculocutaneous albinism. Deaf mutism,¹¹ epilepsy, polydactyly and oligophrenia also have been reported in association with albinism, but their relation to this condition is not clear.⁹

Melanocytes, the melanin producing cells, are present in skin of patients with albinism. However, the mechanism by which melanin granules fail to develop is not completely known. A few hypotheses have been suggested as follows: (1) lack of tyrosinase, (2) lack of melanin polymerization, (3) lack of protein necessary for the synthesis of matrix of melanin granules, (4) unavailability of the substrate, tyrosine and (5) presence of inhibitors tyrosine to melanin pathway.⁹ Both the lack of tyrosinase and lack of availability of tyrosine might play important roles in oculocutaneous albinism. No treatment for this disease is known at the present time. However, actinic keratosis of skin and cutaneous cancers can be treated properly and skin can be

The author discusses in detail the cutaneous manifestations of certain hereditary diseases caused by abnormalities in the metabolism of phenylalanine and tyrosine. They include albinism, phenylketonuria and ochronosis. Doctor Bamshad is in the private practice of dermatology at the Florissant Medical Center.



Fig. 4 Hyperpigmentation of skin due to deposition of homogentisic acid in skin in patients with alcaptonuria.

deficiency of melanin granules; dermographism also has been seen.

The mechanism by which phenylketonuria is produced is well known. It is due to deficiency



Fig. 5 Hyperpigmentation of skin and cartilage of ear in patients with alcaptonuria (ochronosis).

of phenylalanine hydroxylase in the liver and lack of formation of tyrosine from phenylalanine; therefore, phenylalanine will accumulate in the cells, disturbing functions of those cells and changing metabolism of other substances, such as tryptophan and tyrosine.¹⁴ An excessive amount of phenylalanine undergoes an oxidative decarboxylation to form phenylpyruvic acid. A few more metabolic products of phenylalanine, such as phenylacetate, phenyl lactate and phenylpyruvate, also are produced. All are excreted into the urine. Fortunately, a simple FeCl_3 test is an excellent diagnostic tool by which phenylketonuria in all of these patients can be recognized immediately after birth. By adding a few drops of FeCl_3 to the patient's urine, a green-olive color can be demonstrated. Then, by eliminating phenylalanine from the patient's diet to the point that it meets only the daily requirement, all major biochemical abnormalities can be reversed; in infants they will not develop at all. Skin and hair become darker, and eczema clears up.¹⁵⁻¹⁷ Impairment of intelligence in infants will be inhibited and further impairment of intelligence in adults will be prevented.

OCHRONOSIS

Another metabolic disease involving metabolism of tyrosine is alcaptonuria. In this disease, homogentisic oxidase is deficient in the liver. This acid, therefore, will accumulate in the tissues and will be excreted by the kidneys.⁴ In early stages of the disease, when pigmentation is the only manifestation, the disease is called alcaptonuria. However, as disease progresses and when other manifestations such as arthritis are clinically recognizable, it is called ochronosis.⁹

The skin manifestation is characterized by brownish discoloration of the skin (Fig. 4) because of deposition of homogentisic acid in the skin or because the skin is overlying other tissues such as cartilage and tendons (Fig. 5) in which homogentisic acid has been deposited. Bluish discoloration of the ear cartilage is one of the earliest signs. Pigmented granules also are present in the cytoplasm of the cells and in the basement membrane of sweat glands. Secretion of these glands is dark and stains the clothing brown.¹⁸ Pigmentation also may be found in any of the outer structures of the eye, including sclera and cornea. Due to excretion of a great amount of homogentisic acid by the kidneys, the urine of these patients looks dark or turns dark on standing (Fig. 6) when homogentisic acid is oxidized to a melanin-like product.

Other clinically important manifestations are

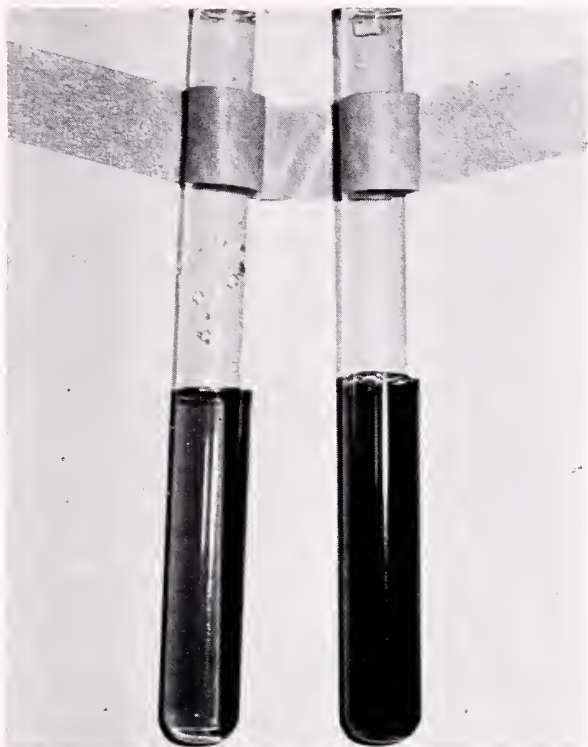


Fig. 6 Dark urine of a patient with alcaptonuria is compared with normal urine.

arthritis, mitral or aortic valvular disease,¹⁹ generalized arteriosclerosis,^{20, 21} rupture of intervertebral disc,²² prostatitis²³ and renal stone.²⁴ A simple and easy test by which this disease is recognizable, especially in infants, is to add an alkaline substance, such as a few drops of soap solution to the patient's urine which then darkens; this phenomenon may first come to the mother's attention when she is washing diapers.⁹

There is no specific treatment for this disease. However, because ferrous iron is necessary for activity of the enzyme homogentisic oxidase and Vitamin C tends to keep iron in its ferrous state,²⁵

a large amount of Vitamin C may be helpful and may reduce some of the complications.²⁶

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The American College of Physicians has come out strongly in favor of a stepped-up program to find the cause and cure for cancer as recommended by President Nixon in his State of the Union Message.

The Board of Regents of the ACP adopted a statement at its recent 52nd Annual Session in Denver, Colo. recommending that the "extraordinary national program in cancer" be carried out under the aegis of the National Institutes of Health—either within the National Cancer Institute or by a separate office within the National Institutes of Health organizational structure.

Psychosomatic Purpura

Case Report

AUTOERYTHROCYTE SENSITIZATION was originally described by Gardner and Diamond¹ in 1955. It is a syndrome characterized by painful reddish lesions on the skin that come on very abruptly and rapidly become ecchymotic in character. The patient's attention is drawn to a new lesion by a sudden pain, described as sharp, stinging, stabbing or burning. A lump then appears, followed within a few minutes by erythema. An ecchymosis then spreads within an hour or so. Although the erythema usually lasts a day or so, the ecchymosis persists a week or longer. Typical lesions usually appear without the patient's being aware of injury. Waldorf and Lipkin,² however, have reported a well supported case of sensitivity to erythrocytes with purpura subsequent to traumatic ecchymosis in which the emotional component is not stressed.

Agle *et al*³ have described in detail four cases of purpuric lesions in which psychological factors appear to be major components in the etiology of the lesions. They noted spontaneous ecchymosis with an inflammatory component that could be induced by (1) an intradermal injection of a drop of the patient's own blood, (2) an intradermal injection of saline with the concomitant suggestion that the ecchymosis will appear, (3) suggestion alone under hypnosis that an ecchymotic lesion will appear and (4) apparently (from historical data) the induction of a stressful situation. The authors referred to the phenomenon as autoerythrocyte sensitization be-

cause of the apparent reaction of the patient to an intradermal injection of autologous blood and an absence of known hemostatic defects.

CASE REPORT

A 15-year-old white boy was well until four days prior to admission to University Hospitals on Feb 2, 1968. At that time, he developed sudden nausea, vomiting, chills and numbness in the upper extremities. This was followed shortly thereafter by a severe pricking sensation and the appearance of linear ecchymotic spots over the dorsal aspect of his arms and forearms (Fig. 1).

There was no history of trauma, epistaxis, mele-



Fig. 1 Linear ecchymotic spots over the dorsal aspect of patient's arm.

A report of the occurrence of purpura, featuring spontaneous ecchymosis, in a 15-year-old boy. Although this case appears to be an instance of psychosomatic purpura, there is no clear evidence to suggest that an autoimmune mechanism, such as autoerythrocyte sensitization, is involved. Doctor Lababidi is Assistant Professor, Department of Pediatrics, University of Missouri School of Medicine. Doctor Friedman is a Psychiatrist at the University of Iowa, Iowa City.

na or hemoptysis. The skin temperature of the arms was slightly elevated, but the boy's hands were cold and clammy. Both arms were very tender. There were three rows of ecchymotic spots over the dorsum of the arms and forearms. The lesions were symmetrical on both arms. There was no butterfly rash over the face and the rest of the physical examination was negative.

Results of laboratory studies done at this point, which revealed nothing remarkable, are reported in Table 1.

The patient was treated with 20 mg of prednisone poq six hours for two days, and the pain and tenderness disappeared within 12 hours of the ini-

TABLE 1
BLOOD COUNTS

Hgb	14.3 gm %
Hct	44%
WBC	8,300/mm ³
Segs	69%
Eos	1%
Lymph	27%
Mono	3%
Platelet count	375,000/mm ³
Erythrocyte sedimentation rate	1 mm/hr

tial administration. Edema disappeared within 24 hours and the ecchymotic spots within ten days.

On Feb. 21, 1968, the patient was taken to another medical center because of a similar episode of swelling, pain and purpuric rash on both arms as well as a tender lower left abdominal quadrant. Three days prior to this episode, he had developed abdominal pain and swelling of both hands and arms. Laboratory studies similar to those noted above also were within normal limits.

He was afebrile and was treated at this time with elixir of benadryl, one teaspoon every six hours, and had a recovery similar to that when treated with prednisone. He was discharged on Feb. 26, 1968 with the diagnosis of possible allergic vasculitis.

On Feb. 28, 1968, the patient developed a third episode of abdominal pain and tenderness in the left upper quadrant with numbness of the arms which was followed shortly by the appearance of crops of linear ecchymotic spots exactly in the same location as in the previous episodes. He was readmitted to the University Hospitals and intensive laboratory tests were performed (Table 2) which were within normal limits. Urinalysis and stool examinations also were negative. Bleeding and coagulation studies (Table 3) were within normal limits. Therefore, the possibility that the lesions were self-induced was entertained.

The patient was put under direct observation and was given ½ cc of saline intradermally in the ventral side of the left forearm with the suggestion that this would produce the same lesions as had occurred in the previous three episodes. Within a few minutes, he developed nausea and abdominal pain along with numbness and tenderness in his arms and a cold sensation in his hands. Ten minutes later while he was kept under direct observation at all times, an ecchymotic spot 1 cm x 2 cm appeared on the right arm over the deltoid region and five to six minutes later, three others appeared on the same arm. There was one additional spot over the left deltoid area. All were almost the same size. One hour after the injection of saline, he reported feeling better, and the lesions disappeared in three to four days.

One week later, 0.1 cc of the patient's blood was withdrawn from his left antecubital vein and injected intradermally into the ventral side of the

TABLE 2
BLOOD CHEMISTRY

Total serum proteins	7.8 gm %
A/G	4.3/3.5
Alb.	4.3%
α ₁ -globulins	0.4%
α ₂ -globulins	1.2%
β-globulins	0.9%
γ-globulins	1.0%
Serum immunoelectrophoresis: slightly increased IgM (diffuse); IgG and IgA—within normal limits.	
L. E. preparation	negative
Serum creatinine	1.3 gm %
Blood urea nitrogen	16 mg %
Serum complement	83.3 units/cc
C-reactive protein	negative

right forearm. He developed responses similar to those induced by saline injection.

A psychological evaluation of the patient was undertaken at this point. He was found to function within the low-average range of intelligence. This was consistent with his reported grades of low-average in school. The Minnesota Multiphasic Personality Inventory (MMPI) profile was remarkable in that there was a general overall depression of the profile. Although somewhat agitated and concerned during the interview, the patient's MMPI profile did not reveal any depression or excessive somatic concern. There was no evidence of psychotic thought processes.

The patient appeared to be a passive-dependent adolescent who does not handle his aggression appropriately. He reportedly never acts out or argues with his parents. He is passive and acquiescent. His father describes him as a "too good" boy.

TABLE 3
BLOOD COAGULATION STUDIES

Bleeding time	2.15 min
Clotting time (Lee-White)	12.15 min
Silicone clotting time	31 min
Clot retraction	3 hrs
Plasma clotting time	2.0 min
Circulating antieoagulants	0
Prothrombin	
One stage Patient/Control	14.4/14.0
Two stage	65%
Thrombin time—Patient/Control	13.9/10.6
Fibrinogen—Patient/Control	325/379 mg %
Fibrinolysis	
Plasma clot 0%	24 hr
Whole blood 0%	24 hr
Thromboplastin generation	
(3 hr serum)	104%
Partial thromboplastin time—	
Patient/Control	55 and 57/59
Euglobulin clot lysis (120 min)	0.25 units
Fibrin stabilizing factor	negative
Cryo-fibrinogen	positive

It was apparent from interviews and an analysis of the fantasy theme elicited by the Thematic Apperception Test that the patient had difficulty with his own aggressive impulses. Additionally, there was some suggestion of resentment and hostility directed toward his parents which he was extremely reluctant to recognize. However, at no time did the patient allow himself any overt expression of aggression whatsoever. The general picture revealed was that of a constricted, passive boy who became more and more agitated and anxious as the examining session proceeded. The father appeared as an anxious, restrictive man who was relatively intolerant of any overt aggression displayed by his son. The patient's mother maintained the boy in a very dependent role, still dressing and feeding him on occasion.

History indicated that the appearance of the lesions followed closely in time a marked increase in the environmental stress to which the patient was exposed. It appeared that the purpura was linked closely to psychological factors.

There was no recurrence of the purpura after its etiology was explained to the patient and attempts were made by the family to reduce the environmental pressures that were considered to play a role in the generation of his anxiety.

DISCUSSION

Although there appears to be a relationship between emotional factors, the patient's reaction to saline and his own blood and the appearance of the ecchymosis, the nature of the relationship is not at all clear.

While there is some question with respect to the physiological mechanism involved, there is considerable supporting evidence in the literature to link bleeding disorders to psychological factors. In 1927, Rudolph Schindler⁴ suggested the relationship of hysteria to bleeding. Two cases of bleeding on an apparently hysterical basis were described by Jacobs⁵ in 1927. Additional reports by Lifschutz,⁶ Moody⁷ and Ullman⁸ lend further support to the possible psychosomatic nature of some bleeding phenomena. Evidence that vascular beds are controlled by psychic processes has been reported by Chapman⁹ and his associates.

Suggestion appears to play a major role in many of the reported cases. In their report of patients with autoerythrocyte sensitization, Agle and Ratnoff¹⁰ note that the injection of saline solution produced a positive response as great as or greater than that evoked by the patient's own blood if the physician strongly indicated that this was the expected reaction. Reporting on nine cases, these authors found their patients to demonstrate striking uniformity in their psychological characteristics. The patients tended

to express emotional problems in physical ways through both conversion mechanisms and psychophysiological reactions. Their character structure exhibited strong hysterical and masochistic features. In addition, purpuric bouts frequently were seen to be related temporarily to emotionally stressful situations.

Six cases cited by McDuffie and McGuire¹¹ support these findings. Their data, gathered from interviews of patients reportedly with autoerythrocyte sensitization and from the results of the Minnesota Multiphasic Personality Inventory test administered to them, suggests that the patients do not handle aggression appropriately and their physical symptoms may ensue. As has already been noted, evidence relating to the specific mediating physiological mechanism involved in most of the disorders described above is quite sparse. Autoimmune mechanisms were originally thought to be the basis of the etiology and pathogenesis of autoerythrocyte sensitization. These patients have hysterical and masochistic character traits and a strong tendency to give somatic responses to emotional stimuli. The onset of exacerbation of bleeding episodes seemed often to be closely related to emotionally stressful situations. Moreover, ecchymotic lesions were apparently induced in specific locations under the influence of hypnotic suggestion.

It would appear that the designation of what appears to be psychosomatic purpura as the result of an autoimmune mechanism, namely, autoerythrocyte sensitization, may have been premature in some cases. In most cases, as well as can be determined from the reports, the sensitization, if it exists at all, cannot be directly related to the erythrocytes. Nonetheless, the present case taken with other reports lends strong support to the presence of psychological factors in the genesis of physical symptoms even though the mechanism is still obscure.

Considered with the other cases reported in the literature, several points seem to emerge. It seems clear that psychosomatic purpura does exist. In some cases there is a negative reaction to red blood cell stroma and in other cases there appears a positive reaction to red blood cell stroma. In the latter instance, there is usually a reactivity to saline as well.

Nonetheless, the cases reported in the literature so far create some confusion. In many instances, what appear to be patients with psychosomatic purpura are designated simply as instances of autoerythrocyte sensitization, and in

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Special X-Ray Exhibit

SIDNEY RUBIN, M.D., RODGER LAMBIE, M.D. and
EDWIN HERMAN, M.D., *Kansas City**

Radiologic Problem Case

A 7-year-old white girl was admitted to the hospital with a six-month history of intermittent bloody stools. The rectal bleeding began following a high fever of 104 degrees associated with loose bowel movements and some malaise. Physical examination and stool culture did not reveal any abnormalities and the symptoms subsided within one week. The patient did well until shortly before admission when she again noted intermittent blood streaking on her stools.

Past History: The patient was a full-term, normal infant. A large umbilical hernia was repaired at one year of age.

Family History: Both mother and father are well. Her mother has a single pedunculated polyp in the descending colon. Her brother, age 14, is well and her sister, age 11, is well.

Physical Examination: This well-developed, well-nourished white girl was not in acute distress. Her color was good with no skin lesions or icterus. Her temperature was 98.6F. Her head, eyes, nose and throat were within normal limits with no evidence of infection. The chest was clear to auscultation and percussion, and good breath sounds were heard bilaterally. The heart was not enlarged; there was regular rhythm of 84 beats per minute. The abdomen was normal to palpation with no evidence of organomegaly or tenderness. A rectal examination revealed no masses or blood on the examining finger.

Laboratory Data: Laboratory values were as follows: Hemoglobin, 11.8 Gm%; Hematocrit, 36%; WBC's, 6,800; Poly's, 42%; Stabs, 2%; Eosinophiles, 1%; Basophiles, 1%; Lymph's, 54%; Monos, 1%; Platelets, 290,000; Sedimentation Rate, 13; Urinalysis showed, pH of 6; specific gravity of 1.021; protein negative. Glucose and acetone were not found. Occasional white and epithelial cells were found on the microscopic examination. SGOT was 36; SGPT, 10; Cholesterol, 215 Mg%; Serum, Fe Serum Immunodiffusion—Gamma A, 260; Gamma G, 2,500; Gamma M, 250. Total protein, 6.9 Gm%. Electrophoresis: Albumin, 4.3;

Alpha 1, .2; Alpha 2, .7; Beta, .7; Gamma, 1.0; A/G ratio, 16. Stools: 4+ for occult blood; negative for salmonella and shigella.

X-ray Findings: Upper gastrointestinal tract examination was entirely within normal limits. Small intestinal studies showed a nodular pattern in the terminal ileum (Fig. 1).

Barium Enema: The entire large intestine, as well as the terminal ileum and appendix, were well visualized. Numerous small polypoid masses were scattered throughout the colon, being more prominent in the transverse, descending and sigmoid loops of the colon. These were best demonstrated on the postevacuation



Fig. 1 Small intestinal study showing nodular mucosal defects.



Fig. 2 Postevacuation film showing prominent polypoid defects scattered throughout the entire colon and terminal ileum.

films (Fig. 2). The terminal ileum also showed fine, granular nodularities. On pressure spot films, the polyps could not be effaced (Fig. 3). However, the colon and ileum appeared to be entirely pliable and of normal calibre.

Differential Diagnosis:

1. Familial polyposis.
2. Generalized lymphoid hyperplasia.
3. Lymphosarcoma.
4. Mastocytosis.
5. Peutz-Jeghers syndrome.
6. Gardner's syndrome.

Radiological Diagnosis: Urticaria pigmentosa

This is the fifth in a series of articles presenting unusual radiologic problem cases which the authors believe will be both interesting and educational for the practicing physician. Drs. Rubin, Lambie and Herman are from the Department of Radiology, Menorah Medical Center where Doctor Rubin is Chairman. They were assisted by Hal Marshall, M.D., Pathologist.



Fig. 3 Pressure spot film of the sigmoid colon showing the numerous polyps which could not be effaced.

is a disease of the skin in which there is infiltration of the dermis by tissue mast cells.¹ Recently, some cases have been recognized with small bowel involvement showing mucosal nodularities or bowel wall thickening or both. The absence of the classical clinical features easily rules out this disease. Both the Peutz-Jeghers syndrome² and Gardner's syndrome^{3, 4} can present with polyps of both the small intestine as well as the colon. The classical skin pigmentation of the Peutz-Jeghers syndrome was not found, nor were the multiple sebaceous cysts and osteomas of Gardner's syndrome found.

Multiple nodular defects involving the entire colon and ileum can be seen with lymphosarcoma. However, with extensive intestinal involvement, abdominal pain is a most common clinical feature and thickening of the bowel wall and conniventes is usually seen.

Generalized lymphoid hyperplasia is an attractive diagnosis. When the colon is involved, it is difficult, if not impossible, to distinguish roentgenologically lymphoid hyperplasia from familial polyposis. The final distinction between these two entities must rest with sigmoidoscopy and microscopic study of the biopsy specimen.

A. dysgammaglobulinemia with a deficiency or absence of IGA and IGM has been reported with cases of diffuse nodular lymphoid hyperplasia.^{5, 6} Most patients, but not all, have an increased susceptibility to infection with giardiasis.

Familial polyposis of the colon is a relatively rare condition.⁷ It is inherited as a Mendelian dominant trait and may be transmitted by either sex. Clinical manifestations usually appear at puberty or in the second or third decade of life. The high incidence of colon carcinoma associated with familial polyposis makes it imperative that this condition be separated from other entities that can produce mucosal nodular defects simulating true polyps. It has been our experience that mucosal nodularities associated with lymphoid hyperplasia can be effaced to some extent on pressure spot filming. True polyps, on the other hand, we have not been able to efface. For this reason, familial polyposis was our number one impression.

Sigmoidoscopic Examination: Sigmoidoscopy to 20 cm showed the mucosa to be studded with nonumbilicated, dew-drop polyps. Biopsy was taken.

Pathological Diagnosis: Multiple intestinal polyps showing mild atypia.

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Psychosomatic Purpura

(Continued from page 388)

some cases in which there is clear evidence of support to autoerythrocyte sensitization, the possibility of psychogenic purpura is not supported. Conservatively, it can only be conjectured that the physiological mechanism that mediates the formation of the psychosomatic purpura may be similar to that which occurs in autoerythrocyte sensitization, but as yet the evidence is far from conclusive.

The fact that the ecchymotic lesions can be generated almost at the will of the investigator enables the study, in some detail, of both the psychological and the physiological correlates and mechanisms that are associated with the development and manifestations of the ecchymotic lesions. This potential for repeated observation of the entire stress situation culminating in the appearance of physical symptoms usually is not available in most psychophysiological disorders.

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The 31st Annual AMA Congress on Occupational Health will be held at Jackson Lake Lodge in Grand Teton National Park, Wyo. on Aug. 29-30, 1971.

The Medical Care Group of Washington University

A Health Care Experiment

THE MEDICAL CARE GROUP of Washington University (MCG) is an experiment in medical practice developed by the Division of Health Care Research of Washington University and supported by research grants from the Metropolitan Life Insurance Company and the W. K. Kellogg Foundation. The plan was developed (a) to compare in study and control patients the effect of an experimental ambulatory health insurance on hospital use and health status, (b) to develop a system of family oriented group practice that would use, but would not duplicate, the special skills available in the medical center, (c) to collect sound data about utilization and costs of medical services in a manner which would identify any savings of hospital expense and show what portion of such savings would have to accrue to a medical group before that group could be on a sound fiscal basis, (d) to learn the size a group like MCG would have to be in order to make a significant contribution to the medical care capabilities of the community, (e) to gain information upon which a plan for improved care of indigent patients could be based, (f) to begin a practice which might become a base for teaching comprehensive health care and (g) to provide a nucleus around which faculty interested in health care research could be assembled. Another goal was to stimulate health care research in the Washington University School of Medicine. This paper describes this program and indicates its possible potential for health care.

MCG is housed in a remodeled section of the Wohl Clinic Building of Washington University School of Medicine in conjunction with the Division of Health Care Research offices and library. MCG is a family care plan incorporating screening, preventive, diagnostic, therapeutic and continuing medical care in one unit, with the aim that both general and consultative specialty services will be provided in a single loca-

tion insofar as possible. Since the research program to be operated in conjunction with MCG demanded that the medical care delivered be monitored carefully, that accurate records be kept and that a satisfactory control group be defined, the practice will be kept small. A maximum of 500 study families and a comparable number of control families have been chosen as that size small enough to allow complete study and large enough to provide significant data.

The study families begin care in MCG by appointment for a complete history and physical examination and screening evaluation. If they must be seen for an illness before their complete evaluation, a later appointment for their complete check-up is made at the time of the initial visit. The internist who first sees an adult patient remains that patient's personal physician; the same applies in the case of the pediatrician who first cares for a child. Control families are given the same complete evaluation as are the study families, and all the information obtained is made available to them and, with their permission, to their private physician. Further details of control selection will be given later.

All regular office medical services are provided in MCG offices during specified office hours, but physicians are available for patient care 24 hours a day, seven days a week. All hospitalization needed is carried out in the Barnes-Washington University hospital group, where MCG physicians hold both hospital staff and Washington University faculty appointments. The patient's personal MCG physician remains responsible for his care when he is admitted to the hospital.

When a consultation in any of the specialties not represented in MCG is needed, it is made by the appropriate specialist from the full-time medical school faculty. Needed surgery is performed by surgeons of the Department of Surgery senior staff, with the MCG physician

maintaining direct patient contact during the surgical admission. Follow-up care is provided by the MCG physician in the MCG offices.

THE INSURANCE PLAN

The insurance plan was developed as an integral part of the medical care program to provide a payment mechanism which was intermediate between fee-for-service practice and full prepayment by capitation and which might be adaptable to present methods of medical care organization and practice.

The plan uses the insurance mechanism with funds received by MCG for services rendered negotiated between the insurance company and MCG on the basis of current medical fees used in the medical center. Actuarial estimates of utilization provide the basis for these negotiations, and appropriate adjustments are planned at regular intervals. The physicians who staff MCG are salaried, but MCG pays for laboratory procedures, X-ray services, consultations, surgery and other professional services provided to MCG patients on fee-for-service full charge basis.

The services covered by the plan include the following:

1. Office visits in MCG offices.
2. Night, week-end, emergency and home calls by MCG physicians.
3. Hospital visits by MCG physicians or consultants.
4. Preventive check-ups.
5. Immunization and allergy treatment.
6. Ambulatory X-ray and laboratory services.
7. All specialty consultations.
8. Prenatal and postnatal and presurgical and postsurgical care.
9. Outpatient psychiatric treatment when the patient is referred by an MCG physician.
10. Rehabilitation evaluation and short term treatment.

Dental care and refractions are excluded, as is cosmetic surgery, unless the need for such surgery arose from an accident or is necessary for the psychiatric rehabilitation of a child.

Both MCG and control patients retain the same basic hospital insurance plan they had before enrollment, either a usual insurance or a Blue Plan, and continue to pay for that plan by whatever arrangements they made before MCG was begun. The only difference between the study and control groups is the availability to the

The Medical Care Group of Washington University is a small experimental group practice designed to test the effect of a new ambulatory health care insurance on hospital care and health status. The data collected should indicate whether or not an ambulatory health insurance applied under this slightly different system can provide an effective method of medical care financing which might be useful to physicians and their patients today. The author is from the Division of Health Care Research and the Departments of Medicine and Preventive Medicine and Public Health, Washington University School of Medicine. This work was supported by grants from the Metropolitan Life Insurance Company, W. K. Kellogg Foundation and National Fund for Medical Education.

study patients of the MCG plan for ambulatory health insurance.

Employees from three companies were offered the MCG plan. Each of the companies provided a basic health and hospital plan for their employees, some portion of which was carried by the Metropolitan Life Insurance Company.

Enrollment was conducted separately in each of the companies. With company #1, 100 family places were offered. More than 200 people applied for these first 100 places, and names of the 100 study families were drawn by lot. The remaining employees who enrolled were asked to serve as the control group for the study families. The same procedure was used in the case of company #3, where almost 600 people enrolled for 150 open places. The control group then was developed from the remaining enrolled persons not chosen by lot to be MCG members. Not enough employees of company #2 enrolled to permit development of a control group.

For ethical reasons, neither the MCG administrative nor medical personnel were involved in the enrollment procedures.

Following enrollment, all family members become active MCG members at a subsequent prearranged starting date. If enrollees discontinue the plan or transfer to another area, their health insurance reverts from the MCG plan to the basic plan as it was before MCG was initiated. Several of the initial enrollees discontinued the plan shortly after enrollment. In most of such

instances, the enrollee had not realized he would have to give up a relationship to his own physician at the time he became an MCG member. This was particularly likely to result in discontinuance if the patient was undergoing psychiatric treatment and had a productive relationship with his psychiatrist. Only in one or two instances was the patient dissatisfied with MCG as he found it.

The evaluation of medical care utilization is a major aim of the MCG program, and a specific system has been set up to allow retrieval of the desired information. For each patient encounter, the physician or, in the case of nonphysician services, the nurse fills out an events form indicating the services and procedures given the patient. These then are transcribed to a recording form and coded according to the services rendered. On the same form, diagnoses are coded according to the International Classification of Diseases, procedures are coded according to the California Relative Value Scale and the physicians' names are entered. For each service, the standard fee also is entered. In the case of MCG rendered services, these are the charges MCG would have made for its services if it were a fee-for-service practice. Since MCG physicians are salaried and MCG receives its funds in a negotiated amount per family, these "charges" are for the record only. The patient does not pay them and the physician does not receive them. In the case of X-ray, laboratory or consultative services, the actual fees charged to and paid by MCG are entered. The recording forms are submitted monthly for computer storage and analysis, and desired information is generated at regular intervals.

Hospital utilization data from study and control groups are available from Metropolitan Life Insurance Company for patients who carry a Metropolitan hospital insurance plan. Where another carrier has the hospital plan, such data are obtained from hospital records.

The measurement of outcome is the most difficult and problematical aspect of the MCG program. Two approaches are being tried. For evaluation of the medical care given in MCG itself, an audit system applicable to office records has been developed. It is hoped that regular estimation of performance against preset standards will provide a measure of the level of medical practice of the physicians in the group. It is not certain whether or not it will be possible to apply the same audit to control patients' records. Some private physicians may be willing to have rec-

ords audited, but it is expected that many will not make their records available to us for study.

The major basis for evaluation of MCG is comparison to be made between MCG experience and that of the comparable control families available for two of three enrolled groups. The screening examinations of both study and control patients will permit an estimate of the degree of comparability between them and allow reasonable determination of health status in the two groups. Data from the screening examinations also are coded for storage and retrieval. This should make it possible to interpret on factual grounds any similarities or differences found in hospital and medical care utilization.

The MCG accounting system should permit separation of research and operational costs. In addition, since the record form shows not only the service rendered, the diagnoses made and the payments made by MCG for services rendered by others, but also the fees that would be charged for MCG services if MCG were a standard fee-for-service practice, the actual costs of medical care can be compared to those which would have obtained if practice were completely on a fee-for-service basis. With this data available, it should be possible to calculate the volume of operation and level of hospital savings which will be necessary for the MCG plan to be a sound operation from an economic point of view.

We believe that it is important to develop programs like MCG within the medical center, both to test possible improved methods for delivery and financing of medical care and to provide within the center a basic program for teaching of medical care. We hope this kind of unit will be a valuable laboratory for the study of medical care and a meeting ground for clinical practitioners and academic physicians in the area of comprehensive medical care. Further, we hope the data we obtain will allow us to develop functional plans for ambulatory care of indigent patients within our medical center. It is important to state that the data derived from the MCG practice will be the basis for future developments of the MCG plan, if it is a feasible plan. For this reason, the MCG experiment, whether it succeeds or fails, will itself help to determine future directions of medical care at the local level and, perhaps, elsewhere.

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Abdomino-Perineal Resection In a Jehovah Witness

Case Report

RESECTION of a rectal carcinoma in a Jehovah Witness is a problem infrequently seen by an individual surgeon. The following case report presents the successful management of this problem.

CASE REPORT

A 52-year-old white woman was admitted to St. Joseph's Hospital on Feb. 24, 1970 for evaluation of abdominal pain which had been present intermittently for approximately one year. She occasionally had nausea and vomiting with the pain and at times noted fatty food intolerance. She had noted rectal bleeding intermittently for six months, and this had become more frequent during the past one to two months. There had been no change in bowel habits or size of the stool. No other significant symptoms were elicited in the history.

Physical examination showed that blood pressure was 170/100; pulse rate, 88 beats per minute; temperature, 98.4°F; respiration rate, 22; weight, 190 lb; and height, 5 ft 1 in. Examination was completely negative, except for evidence of an old corneal injury in the right eye, marked obesity and a trace of ankle edema. Rectal and pelvic examinations were negative.

Laboratory studies disclosed the following values: white blood cell count, 11,000 with normal differential; hematocrit, 38%; hemoglobin, 12.1 gm/100 cc; urine—trace of albumin, specific gravity, 1.028. Two-hour postprandial blood glucose, 100 mg/100 cc. Stool: Occult blood positive. Prothrombin time control was 12 seconds; patient, 12.5 seconds. PPT = 62 seconds; clot retraction was complete in four hours; clot lysis was normal in 24 hours. Reticulocyte count was 2%. Blood urea nitrogen was 10 mg/100 cc.

X-Rays of chest and gallbladder were negative. Upper gastrointestinal examination showed 3.0 cm sliding hiatus hernia. Barium enema revealed a 4 cm polypoid defect in the upper rectum and a 4 cm polypoid defect in the mid-sigmoid.

Proctoscopy revealed a large polypoid lesion on the anterior rectal wall 10 cm to 12 cm above the anal verge. Biopsy revealed adenocarcinoma. Fol-

lowing proctoscopy, the patient received iron orally. Repeat hemoglobin and hematocrit tests on the day prior to surgery showed hematocrit value to be 39% and hemoglobin level to be 12.4 gm/100 cc. Bowel preparation consisted of liquid diet, daily laxatives and enemas for the three days prior to surgery. The night before surgery, 500 mg of ampicillin were administered intramuscularly every six hours. Two grams of ampicillin were given intravenously during the procedure, and 500 mg of ampicillin were given intramuscularly every six hours for 36 hours following surgery.

On March 13, 1970, abdomino-perineal resection, with total abdominal hysterectomy, was performed. The findings at the time of surgery revealed a 4.5 cm polypoid lesion in the mid-sigmoid colon, which was soft and freely movable, with a broad stalk and no serosal puckering. The rectal lesion, which was palpated immediately below the peritoneal reflection, also was polypoid and soft but not nearly as mobile as the proximal lesion. No evidence of pelvic fixation or adenopathy in the internal iliac or periaortic chain was found.

Electrocautery was used during the dissection. Prior to beginning the pelvic dissection, the internal iliac arteries were doubly ligated with No. 1 ehromic catgut. Estimated blood loss during the procedure was 1,000 cc. Fluid replacement consisted of 4,500 cc of Ringers Lactate Solution and approximately

In addition to the medical problems involved in major elective surgery for a Jehovah Witness, legal, moral and psychological problems must be considered. This paper reports the successful procedure for resection of a rectal carcinoma and offers consultation suggestions that will minimize any misunderstandings regarding the management of these patients. Doctor Schneider is Staff Surgeon at St. Joseph's Hospital and St. Charles Clinic and an Instructor in Surgery at the St. Louis University School of Medicine.

500 cc of 5% Dextrose and water. Hematocrit on the second postoperative day was 34%, and hemoglobin level was 10.7 gm/100 cc. Urinary output was monitored for 96 hours postoperatively and was adequate at all times. Pathologic examination revealed the sigmoid lesion to be a villous adenoma. The lesion in the rectosigmoid revealed an adenocarcinoma arising in a villous adenoma with extension into the muscularis. No lymph node metastasis was found. Postoperatively, the sole complication was the development of a wound infection, which was treated by opening the subcutaneous wound and appropriate dressings. The culture of the wound grew out *Proteus*, *E. Coli* and *Alpha-Streptococci*. By March 18, 1970, the patient had resumed a low residue diet. The wound was "butterflied" on March 26, 1970, and the patient was discharged on March 29, 1970.

DISCUSSION

Major elective surgery in a Jehovah Witness presents not only medical problems, but legal, moral and psychological problems as well. Refusal to perform a potentially curative operation on a certainly lethal disease, because of the patient's refusal to allow use of blood or blood products, condemns the patient to eventual death from the process. If the patient consents to the procedure with its associated risks and absolves all concerned from responsibility because of his refusal to accept blood or blood products, surgery should be carried out when the patient is in optimum condition.

Several papers have been published concerning the management of Jehovah Witnesses undergoing open heart surgery.¹⁻⁴ Reports concerning traumatic surgery⁵ and elective abdominal surgery⁶ in these patients are few. A comprehensive report⁷ discussing the religious, legal and medical aspects of this problem clarifies the position which an involved physician should take. Appropriate consultation with the patient, his family and religious leaders, attorneys and

malpractice carriers preoperatively will minimize any misunderstandings regarding the management of these patients.

TREATMENT

Extensive coagulation studies should be done preoperatively to uncover potential obscure clotting abnormalities. Intraoperative attention to hemostasis, although an integral part of every surgical procedure, should be followed with greater care. Utilization of techniques perhaps not routinely followed, such as the use of electrocautery and ligation of the internal iliac arteries before initiating pelvic dissection as in this case, should be considered. The procedure should be planned so that it might be terminated before the ultimate resection is accomplished, if unusual blood loss occurs. In this case, the perineal phase could have been postponed, if necessary, and performed at a later date.

SUMMARY

Successful management of a rectal carcinoma by abdominoperineal resection with total abdominal hysterectomy in a Jehovah Witness is reported. Some of the pertinent medical, legal and moral problems are discussed. Indicated operative procedures should be done providing the patient understands and accepts the increased risks involved.

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Dr. Richard A. Sutter of St. Louis has been named to the "Governor's Council, Occupational Health and Safety Task Force" of Missouri by The Governor's Advisory Council for Comprehensive Health Planning which has initiated meetings to assess the status of Occupational Health and Safety Programs in Missouri. The Task Force has been designated to serve as an advisory body to actively assist in the creation of any program or plan devised by the Governor's Advisory Council.

An Unusual Cause of Pneumoperitoneum

Case Report

SPONTANEOUS PNEUMOPERITONEUM results from gastrointestinal perforation in most cases and usually is associated with signs of peritonitis.

Spontaneous pneumoperitoneum with mild abdominal symptoms has been seen with broncho-pleural fistula,¹ pneumatosis cystoides intestinalis² and jejunal diverticulitis.³ However, probably the commonest source of peritoneal air with mild symptoms is via the female genital tract.¹ Postpartum coitus,⁴ and postpartum knee chest exercises⁵ have been reported as sources also. Insufflation of the cervix for diagnostic purposes (Rubin's test) requires a pressure of 40 mm-80 mm Hg in the presence of patent tubes to produce pneumoperitoneum.⁶ The following case of pneumoperitoneum following oral (male)-genital(female) sexual contact may become a more prevalent entity as modern sexual activities become more varied.

CASE REPORT

A 24-year-old woman, who was two months postpartum, was seen because of abdominal pain of 15 hours duration at Bothwell Memorial Hospital, Sedalia, Mo. The pain began as a generalized pain at 5 AM and some six hours after the onset, left shoulder pain was noted. She had been anorectic but denied nausea or vomiting. She had worked at her regular job the day of admission. She initially denied sexual activity preceding the onset of abdominal pain.

A physical examination showed that her temperature was 99.2 F; pulse rate, 100 beats per minute; respiration rate, 30 per minute; and blood pressure, 130/100.

An alert young woman, she appeared to be moderately ill and moved about with an expression of abdominal discomfort. Abdominal palpation revealed moderate general tenderness more marked in the right upper quadrant. No guarding was noted, but some rebound tenderness was present. Bowel sounds were normal. Pelvic and rectal were compatible with general peritoneal irritation of mild degree. The white blood cell count was 14,800 with a normal differential.

An upright abdominal x-ray (Fig. 1) revealed massive pneumoperitoneum. Exploratory laparotomy

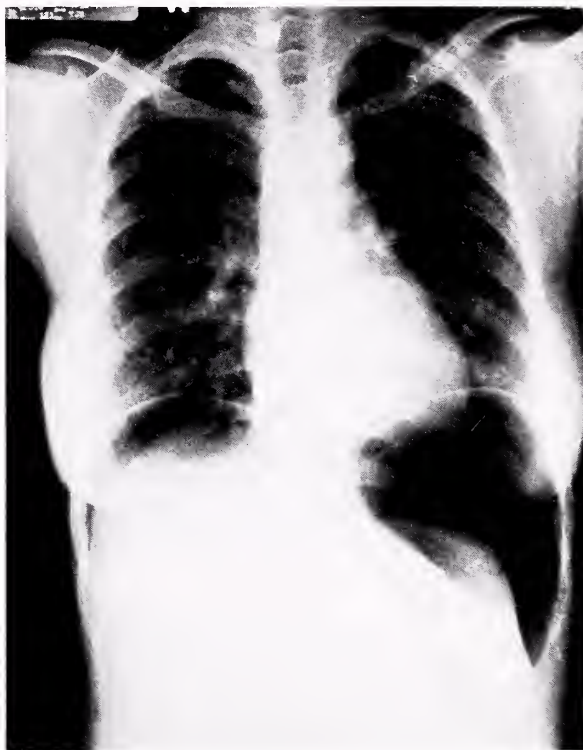


Fig. 1 Large collection of intraperitoneal air on supine abdominal film.

revealed only free air and mild serositis. Under more direct questioning the morning after surgery, the patient admitted having had oral-genital sexual relations immediately preceding the onset of her acute illness.

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1718 S. Ingram
Sedalia, Mo. 62501

* Doctor Glass is in the private practice of medicine.

President's Message

If you are not already acquainted, may I introduce another alphabetical nomenclature to your bulging armamentarium.

HMOs or Health Maintenance Organizations do not represent a new concept in delivery of health care. They are becoming increasingly popular with health planners, social architects and legislators, however, as a means of delivering total health care (preventive, acute and supportive) at presumably less cost than the current fee-for-service mechanism.



Gerald L. Miller, M.D.

Existing HMO programs familiar to most of us are the Kaiser Permanente Foundation, which was launched successfully in California in this era, and the Garment Workers Medical Panel System, which is throughout the states to care for the medical needs of garment workers and their families. There are currently many more such programs, most of which are established in an industrial climate. On occasion, the programs, such as the Kaiser Foundation, have been developed by industry. However, this method of delivery of health care has not uncommonly been a product of labor and the pressure of its strong unions.

Fundamentally, HMOs may have varied settings. The groups of people to be cared for may be in geographic areas, unions, etc. The defined population will then contract with a panel of physicians for their total care for a year or more at a specified cost per individual or family per month. The panel physicians responsible for total care may be salaried or within the contract. They perform services on a fee-for-service basis. More often, the contracting physician providing primary care is salaried and contracts individually for specialty care, such as neurosurgical, hematological, etc. on a fee-for-service basis.

The primary thesis for apparent increasing popularity of "health maintenance organizations" as a health-delivery mechanism is "hoped for" increased emphasis on preventive medicine and increasing ambulatory vertical care as opposed to the existing, expensive high utilization of horizontal or hospital care. A voice has been heard in the midst of HMO borborygmus that this may destroy America's unique and superior hospital system.

This we cannot afford because despite hospital overutilization, the scene reflecting the great progress of American Medicine during the past two and one-half decades in care of the "truly ill" is in the hospital setting. Those who see merit in significant expansion of the HMO effort and are concerned about the survival of a remarkable hospital system and its acknowledged weaknesses propose basing the HMO about the hospital with care of the patient block by well-organized staff of that hospital, perhaps as a closed panel.

Foundations, corporations and panels of the United States involved in this type of comprehensive care are enthusiastic about their systems and have an active, progressive national organization. Furthermore, the administration's enthusiasm for HMO is reflected with great impact in their package for National Health Insurance. Kansas City and, I presume, many other metropolitan areas have been visited recently on several occasions by officials with a strong private and HEW flavor, taking the pulse of the community relative to the establishment of such programs.

Needless to say, patients and physicians alike may join the HMO within the usual legal definitions and responsibilities. It is a good omen that private and community-

oriented intermediaries are currently involved in HMOs in varying climates, such as those at Harvard and Johns Hopkins Medical Schools with staffing by professors and trainees. Effectiveness of such HMOs in ghetto and inner-city districts also need to be assessed.

There must be a continuing study of new mechanisms of delivery of health care with an ongoing comparison of the good of the new and the old and the salvaging of the best of both for medicine and its patients. Hopefully and surely, pluralistic methods of delivery of health care will survive. Keep in mind, however, that increasing numbers of regimented, large blocks of physician-purveyors of service tend to subtly provoke loss of physician identity and make them vulnerable to social regimentation.

I believe that, somehow, we must avoid reckless, precipitous change in our health system. We must support an orderly evolution through education, research and practice. Medicine must exhibit due concern for cost and manpower problems and a primary, unyielding, tenacious pursuit of "quality care" for our patients through ongoing professional, internal audit in addition to personal and fiscal involvement in the political affairs of the nation.



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Woman's Auxiliary



"Medical Auxiliary Produces Package on Environment"

It was rewarding to discover the above headline in the *St. Louis Post-Dispatch* on April 29. The accompanying story by Mimi Teichman of the *Post-Dispatch* staff is an excellent and extensive report to the general public on the work of the Environmental Health Committee of the MSMA Woman's Auxiliary, which has been chaired by Mrs. M. T. Metzgar of Columbia.



Mrs. Frank J. Valach
President

This story in a metropolitan newspaper attests to the increasing effectiveness of the cooperative approach to environmental problems and the "package program" which was prepared by Mrs. Metzgar, her Committee and Mrs. William M. Walker of Springfield, their consultant. The successful Workshop on Missouri's Environment in Columbia on May 11, which was sponsored by the State Auxiliary, is further evidence of the impact this Committee is making. Representatives of 15 State women's organizations were invited to attend the Workshop. All intend to do something about this problem and are interested in sharing ideas and utilizing our environmental health packet.

What is in this valuable packet? Which organizations were represented at our Workshop? You will be interested in referring to page 368 of this Journal for

this information and a report on the Workshop program.

I am offering this "progress report" in a special effort to attract the interest and urge the participation of the physicians, county auxiliary members and, especially, State Auxiliary members-at-large who could not attend our annual conventions in St. Louis in April.

Mrs. Metzgar and her Committee are trying to coordinate our own Auxiliary efforts with those of other groups to eliminate duplication. Will you help by gaining the cooperation of comparable groups in your own community and county?

Physicians, county auxiliary members and members-at-large can be most effective if they will personally provide their local groups with our environmental health packet and the information it contains. Your help is urgently needed now. Please address your packet order today to Mrs. James N. Haddock, 111 Firwood Dr., Webster Groves, Mo. 63119.

We are proud of the accomplishments of the Auxiliary Environmental Health Committee. Their program provides an important opportunity for individual involvement, and I suggest again that individual involvement is the key to a successful organization and its programs.

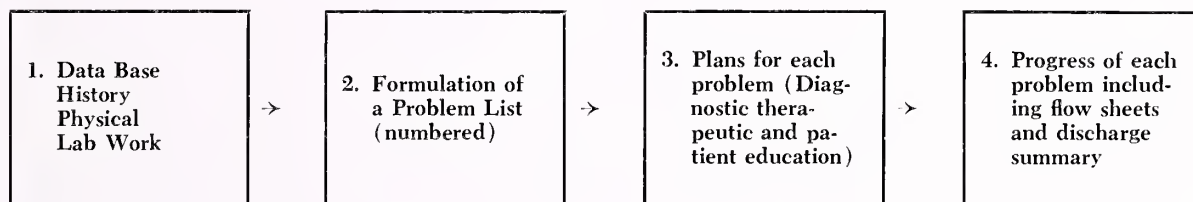
EDITORIAL

WEED'S SEED

Larry Weed dropped into town the other night. He is professor of medicine and of community medicine at the University of Vermont and is developing their computer center. He is best known for his introduction of a system of order into an area of complete disorder, our medical records.

Doctor Weed is of average height, thin, dynamic, inspiring, evangelistic, wears a World War II hairdo and speaks in superlatives ("The most important room in this hospital is the record room"). His plea is based on a single premise; preciseness in record keeping will reflect quality in medical care.

Many of us have heard of the problem oriented medical record and may have some notion as to why it will improve patient care. Schematically it means approaching each patient in this manner:



Provision is made for each level of medical attendant from students and professors on up to private practitioners to record the problems he sees at his own level, e.g., pedal edema and shortness of breath may be two problems to the student and evidence of a single problem, heart failure, to the senior physician.

Doctor Weed points out that the usual practitioner defines quality as what he does and adds, "But most people like to draw their circle after they shoot." Medical audit (peer review) is now wide-

spread and will become more so as third party payment increases. Such audit cannot be meaningful on patients who have multiple complicated problems, unless each problem is clearly defined, planned for and followed, and all this time its relationship to the other problems is carefully observed.

It is not often that a truly significant contribution to the future of medical care can be made by practicing physicians. The problem-oriented medical record affords all of us this opportunity. This system is presently being used increasingly in the East and recently has been begun at General Hospital and, to a limited extent, at Baptist Memorial Hospital.

The entire concept can be adapted to computers, enabling paramedical personnel to take faster and more complete histories than any of us can. A recent *JAMA* issue reviews computerization of the

physical examination, through having the physician fill in the appropriate machine-read blanks on the proper forms.

Larry Weed spoke to 200 persons gathered at General Hospital early this month. His message to us was that the heart of our own continuing education should be beating in our patients' records. Each area hospital medical staff should hear this message. Everyone of us can be a prize-winner.

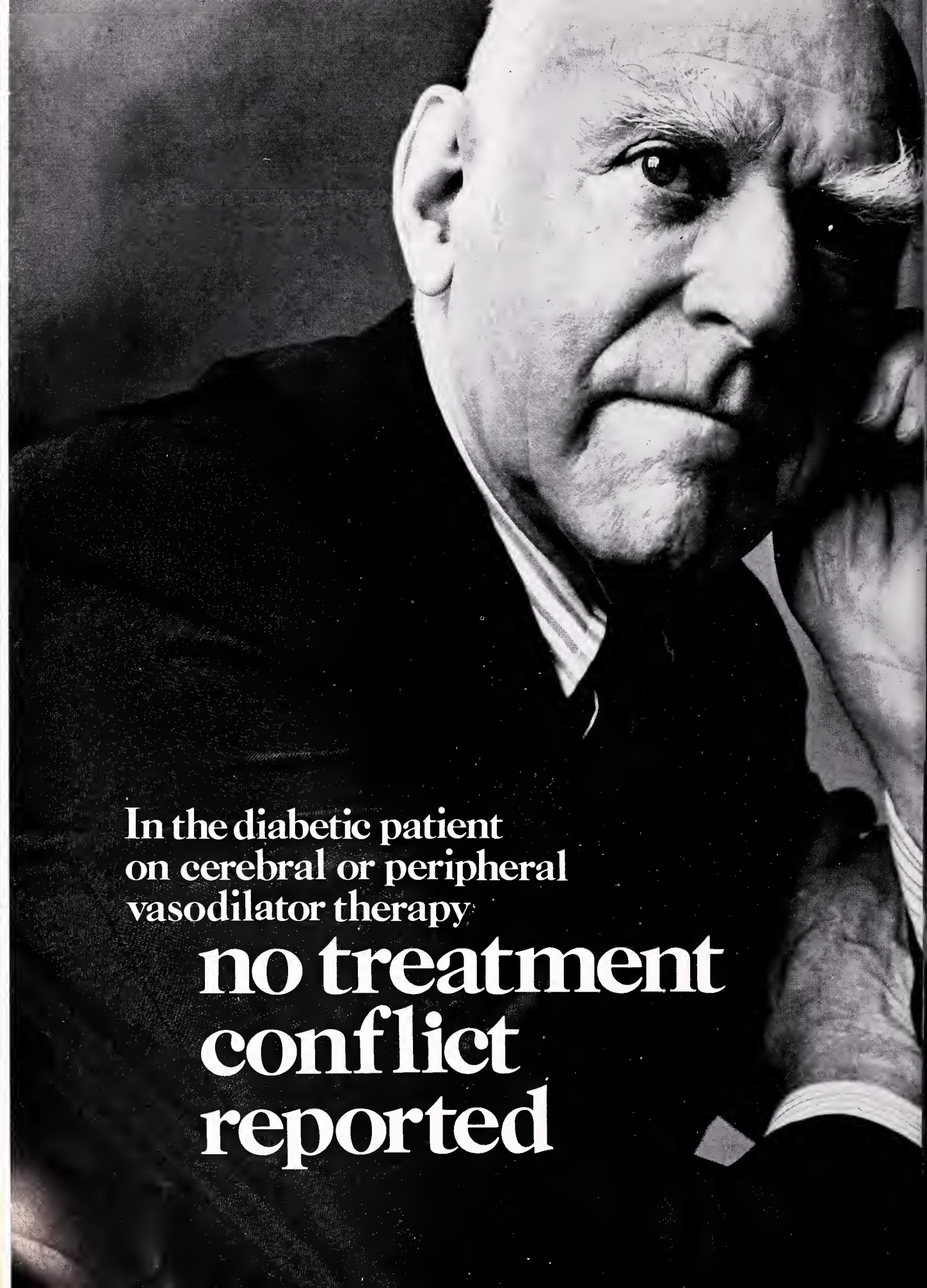
ANDREW McCANSE, Editor
Greater Kansas City Medical Bulletin

PNEUMOPERITONEUM

Dr. Robert L. Glass's timely report on pneumoperitoneum produced by blowing into the vagina (page 397) reminds us that when air is blown into the vagina of the nonpregnant female, pneumoperitoneum may be produced; but if the woman is pregnant or has recently been, air may find its way

into the large venous sinuses of the placental site. A fatal air embolism may thereby result. Fatal air emboli also have been produced by certain forms of medical therapy, such as knee chest exercises.

THOMAS M. MIER, M.D.
St. Louis

A high-contrast, black and white portrait of an elderly man. He is looking slightly to the right of the camera with a serious, contemplative expression. His right hand is resting against his cheek, with fingers slightly curled. He is wearing a dark, textured jacket over a light-colored, possibly striped, collared shirt. The background is dark and out of focus.

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vasodilator therapy**

**no treatment
conflict
reported**

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- conflicts have not been reported with
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- complications in the treatment of coronary
insufficiency, hypertension, peptic ulcer,
glaucoma and liver disease have not
been reported.

In fact, there are no known contraindications in recommended oral doses other than it should not be given in the presence of frank arterial bleeding or immediately postpartum.

Although not all clinicians agree on the value of vasodilators in vascular disease, several investigators²⁻⁵ have reported favorably on the effects of isoxsuprine. Effects have been demonstrated both by objective measurement^{3,5} and observation of clinical improvement.^{2,4}

Indications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebotic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). Composition: VASODILAN tablets, isoxsuprine HCl 10 mg, and 20 mg. Dosage: Oral—10 to 20 mg. t.i.d. or q.i.d. Contraindications and Cautions: There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. Side Effects: Occasional palpitation and dizziness can usually be controlled by dosage reduction. Complete details available in product brochure from Mead Johnson Laboratories. References: (1) Samuels, S. S., and Shaftel, H. E.: J. Indiana Med. Ass. 57:1021-1023 (July) 1961. (2) Clarkson, I. S., and LePere, D. M.: Angiology 11:190-192 (June) 1960. (3) Horton, G. E., and Johnson, P. C., Jr.: Angiology 15:70-74 (Feb.) 1964. (4) Dhrymiotis, A. D., and Whittier, J. R.: Curr. Ther. Res. 4:124-128 (April) 1962. (5) Whittier, J. R.: Angiology 15:82-87 (Feb.) 1964.

Mead Johnson
LABORATORIES

PHONOCARDIOGRAPHY PULSE TRACINGS VECTORCARDIOGRAPHY A WORKSHOP

September 27-30, 1971

This is an intensive four-day program covering in detail the field of phonocardiography and pulse tracings and vectorcardiography. Emphasis will be placed on the values and limitations of these techniques and related areas as applies to the patient's diagnostic problems. Two days will be dedicated to phonocardiography and pulse tracings and two days for vectorcardiography. The morning sessions will be devoted exclusively to individual analysis of tracings by the participants under the orientation of the local and guest faculties. This program is intended for those who wish a close and detailed exposure to the values and the limitations of these techniques.

Presented by

The American College of Cardiology
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Institute for Cardiovascular Diseases
Good Samaritan Hospital
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at

Mountain Shadows Resort Hotel
Scottsdale, Arizona

Program Director

Alberto Benchimol, M.D., Director
Institute for Cardiovascular Diseases
Good Samaritan Hospital

Guest Speaker

Bernard L. Segal, M.D.
Associate Professor of Medicine
Hahnemann Medical College and Hospital
Philadelphia, Pennsylvania

For Information Concerning the Program, Write

Mr. William Nelligan
Executive Director
American College of Cardiology
9650 Rockville Pike
Bethesda, Maryland 20014

County Society News

FIRST DISTRICT

COUNCILOR

JOHN N. MARTIN, M.D., ST. JOSEPH

BUCHANAN COUNTY MEDICAL SOCIETY

Forty physicians from St. Joseph and Northwest Missouri attended the dinner and program of the Buchanan County Medical Society at the St. Joseph Country Club on April 7.

Speaker for the meeting was Dr. James N. Heuser, internist and cancer researcher from Columbia. He discussed "Newer Drugs in Cancer Chemotherapy."

The program was sponsored by the Buchanan County Unit of the Missouri Division of the American Cancer Society as part of their professional education program. A program on the subject of cancer is presented annually at the April meeting of the Medical Society during Cancer Control Month. Dr. Richard O. Craig, program chairman, introduced the speaker.

Dr. Sharon E. Waggoner presided at the meeting and a business session which followed. Mr. Richard J. Knox, field representative for the Cancer Society in Northwest Missouri, was present and distributed a report on the results to date of the Cancer Society's cytology program in several Northwest Missouri counties.

RANDAL W. WEED, M.D., *Secretary*

Dr. John Griffith to Head State Surgical Society

The Missouri State Surgical Society, composed of general surgeons in Missouri, held its annual business meeting and election of officers on April 16 at the University Club in St. Louis.

The following officers were elected to head the Society for the coming year: John Griffith, M.D., Kansas City, president; Hugh E. Stephenson, Jr., M.D., Columbia, president-elect; Arthur E. Baue, M.D., St. Louis, vice-president; and Howard E. Linville, M.D., Kansas City, secretary-treasurer.

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New Members

Jorge M. Alegre, M.D., 5535 Delmar Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Alegre is a native of Callao, Peru, received his preliminary education at the San Marcos University School of Sciences and his M.D. degree at the San Marcos University Medical School in 1965. He specializes in internal medicine.

Ferenc Bankuti, M.D., 6400 Prospect, Kansas City, has become a member of Jackson County Medical Society. Dr. Bankuti is a native of Ujpest, Hungary, received his preliminary education at St. Benedict Gymnasium and his M.D. degree at the University of Medical Sciences in 1952. He specializes in radiology.

Nicholas Bartulica, M.D., State Hospital #2, St. Joseph, has become a member of Buchanan County Medical Society. Dr. Bartulica is a native of Yugoslavia, received his preliminary education at Liberal Arts College and his M.D. degree at the University of Zagreb in 1953. He specializes in psychiatry.

E. C. Carlson, M.D., 623 Pine, Poplar Bluff, has become a member of Butler-Wayne-Ripley County Medical Society. Dr. Carlson is a native of Boonton, N. J., received his preliminary education at the University of Denver and his M.D. degree at the University of Colorado in 1957. He specializes in obstetrics and gynecology.

Mario Decanini, M.D., State Hospital #2, St. Joseph, has become a member of Buchanan County Medical Society. Dr. Decanini is a native of Monterrey, Mexico, received his preliminary education at Escuela de Bachilleres University of Nuevo Leon and his M.D. degree at University of Nuevo Leon in 1953. He specializes in psychiatry.

Harry D. Haas, M.D., 4320 Wornall Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Haas is a native of Kansas, received his preliminary education at Kansas State University and his M.D. degree at the University of Kansas in 1962. He specializes in internal medicine.

Lee Martha Hoffmann, M.D., 4949 Rockhill Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Hoffmann is a native of Orange, N. J., received her preliminary education at Stanford University and her M.D. degree at the University of California in 1965. She specializes in pediatrics.

Manuel M. Mendez, M.D., VA Hospital, Jefferson Barracks, has become a member of St. Louis Medical Society. Dr. Mendez is a native of Mexico, received his preliminary education at Lycee Carmelita and his M.D. degree at the University of Mexico in 1951. He specializes in psychiatry.

Jeanne E. L. Reiss, M.D., 751 E. 63rd, Kansas City, has become a member of Jackson County Medical Society. Dr. Reiss is a native of St. Louis, received her preliminary education at College of Wooster and her M.D. degree at the University of Kansas in 1965. She specializes in neurology.

Arnulfo P. Sulit, M.D., 24th & Cherry, Kansas City, has become a member of Jackson County Medical Society. Dr. Sulit is a native of Iloilo, Philippines, received his preliminary education at Central Philippine University and his M.D. degree at University of the Philippines in 1957. He specializes in internal medicine.

Morris F. Wise, M.D., 3828 Byers, Ft. Worth, Texas, has become a member of Jackson County Medical Society. Dr. Wise is a native of Cincinnati, Ohio, received his preliminary education at Amherst College and his M.D. degree at Washington University in 1964. He specializes in urology.

In Memoriam

Brennan, John A., M.D., Farmington, a graduate of St. Louis University, 1926; member Mineral Area Medical Society; age, 69; died April 1, 1971.

Lytle, W. R., M.D., Rolla, a graduate of University of Tennessee, 1935; member Mid-Missouri Medical Society; age, 59; died April 2, 1971.

Kohler, Eugene J., M.D., St. Louis, a graduate of St. Louis University, 1923; member St. Louis Medical Society; age, 73; died April 4, 1971.

Foster, Jack Lee, M.D., Desloge, a graduate of Washington University, 1944; member Mineral Area Medical Society; age, 54; died April 8, 1971.

From the Medical Schools



ST. LOUIS UNIVERSITY



Dr. Seymour Pollack (left), professor of psychiatry and director of the Institute of Law and Psychiatry, University of Southern California School of Medicine, and Dr. Edward T. Auer, Samuel W. Fordyce Professor of Psychiatry and Chairman of the Department of Neurology and Psychiatry, St. Louis University School of Medicine.

Dr. Seymour Pollack, professor of psychiatry and director of the Institute of Law and Psychiatry, University of Southern California School of Medicine, was a guest lecturer in the Department of Neurology and Psychiatry of the St. Louis University School of Medicine on April 12-13.

Doctor Pollack was the main rebuttal witness for the prosecution in the trial of Sirhan Bishara Sirhan who was found guilty of first degree murder in the assassination of Robert F. Kennedy. He discussed "Principles of Forensic Psychiatry: Application to the Sirhan Case." His visit was sponsored in part by Bristol Laboratories.

The Section of Experimental Medicine at the St. Louis University School of Medicine has received a \$7,000 fellowship from the Kidney Foundation of Metropolitan St. Louis to support the renal metabolism studies of Dr. Hartmut Kannegiesser. The fellowship became effective June 1, 1971.

The award will enable Doctor Kannegiesser, a postdoctoral fellow in the Experimental Medicine Section of the Department of Internal Medicine, to continue his research under the direction

of Dr. James B. Lee, associate professor of internal medicine and director of the section.

As a research fellow, Doctor Kannegiesser has been studying the metabolism of the kidney as related to salt and water excretion which is believed to be deranged in a variety of kidney disorders such as nephrosis and nephritis. Doctor Kannegiesser also has studied prostaglandin PGA, a compound isolated and characterized by Doctor Lee. The compound was discovered in the rabbit renal medulla.

In a clinical study under the National Kidney Foundation award, Doctors Lee and Kannegiesser have treated 20 high blood pressure patients with the compound. They have observed that the patient's blood pressure comes down in short term studies for over a period of an hour or two.

A joint project between the St. Louis University School of Medicine and the Veterans Administration Hospital made it possible for 71 North St. Louis children, who reside in the Murphy-Blair district, to receive free physical examinations. The program was the project of Pi Delta Epsilon, a medical fraternity at the St. Louis University School of Medicine.

Freshman students worked in the laboratories. Sophomore students observed juniors and seniors as they gave physicals. Undergraduate students from the Morrow House program transported the children to the Veterans Administration Hospital.

Dr. Raymond G. Slavin, associate professor of internal medicine, was advisor to the Pi Delta Epsilon fraternity, which originated the idea. Jim Messmer, president of the fraternity, says the group plans to continue the project annually.

Dr. Robert H. Ramsey, assistant clinical professor of internal medicine, will act as chairman of the Missouri Governor's Conference on Arthritis held at Ramada Inn in Jefferson City on May 7-9, 1971.

The St. Louis University Medical Alumni Association will hold a Hospitality Room on June 21, in the Pavilion Room of The Chalfonte-Haddon Hall in Atlantic City, N. J., it has been announced by Matthew W. Weis, Jr., associate director of development at the St. Louis University School of Medicine. The Hospitality Room is being held in conjunction with the American Medical Association annual meeting.

UNIVERSITY OF MISSOURI

An interdisciplinary effort by the Departments of Radiology, Industrial Engineering and the Bioengineering Program at the University of Missouri-Columbia has received a grant of \$255,492 from the National Center for Health Services Research and Development. This amount has been awarded for the first of three years to continue the development of MARS (Missouri Automated Radiology System), an information system to manage medical and administrative data flowing through a radiology department. The total three-year commitment for the project is more than \$550,000.

The system is being designed for use with a small computer which almost any department of radiology could afford, according to Dr. Gwilym S. Lodwick, professor and chairman of the Department of Radiology and principal investigator of the research project.

Others involved in the research effort include Dr. Jay Goldman, professor and chairman of industrial engineering; Drs. H. Allan Knappenberger and Glenn Staats, associate and assistant professor of industrial engineering; Dr. Samuel Dwyer, professor of electrical engineering and chairman of the Bioengineering Program; and Dr. Richard Wallace, associate professor of economics. Drs. Lewis Garrotto, Donald Manson and James Lehr also represent the Department of Radiology on the project.

The recent grant will support revisions and expansion of the MARS program already in operation at the University Medical Center. UMC radiologists believe it is the first clinically operating system of its kind.

David G. Hof, a second-year medical student at the University of Missouri-Columbia, has won a \$500 medical student endowment award in a national competition sponsored by the Society of United States Air Force Flight Surgeons for the best study of aerospace medical problems.

Mr. Hof, who recently received the award at a meeting of the Aerospace Medical Association in Houston, won the endowment for his manuscript on "Circadian Variations in Oxygen Toxicity Seizures."

Dr. James Dexter, assistant professor of medicine, was Hof's faculty advisor on the research.

The Missouri Alpha Chapter of the Sigma Alpha Epsilon (SAE) Fraternity was recently nominated for the American Association of Blood Banks' Award of Merit for their contributions to the University of Missouri-Columbia student blood program. The UMC fraternity was nomi-

nated by Dr. Donald Senhauser, chairman of the UMC Department of Pathology, and Dr. William V. Miller, assistant professor of pathology and director of the University Medical Center blood bank.

In addition to serving as an emergency blood resource to the Medical Center during several holiday crises, the 65-member fraternity has contributed greatly to campus example and support. Their efforts, for example, were instrumental in the success of the fall student blood drive in which a campus record of more than 930 pints were donated.

WASHINGTON UNIVERSITY

Ronald G. Evens, M.D., assistant professor of radiology and James Picker Foundation advanced fellow in academic radiology, has been appointed professor and head of the Department of Radiology at Washington University School of Medicine. He will assume the administrative position on August 1. He also will become director of the Edward Mallinckrodt Institute of Radiology.

Doctor Evens succeeds Juan M. Taveras, M.D., who is leaving to head the Department of Radiology at Massachusetts General Hospital and Harvard Medical School in Boston, Mass.



Dr. Evens

Doctor Evens received the A.B. degree in 1961 and the M.D. degree in 1964 from Washington University. He did his internship and residency at Barnes Hospital and Mallinckrodt Institute of Radiology, and was a research associate at the National Heart Institute in Bethesda, Md.

In 1970, he was elected vice president of the Washington University Medical School and Associated Hospitals. He also is a consultant to the Bi-State Regional Medical Program, a member of the executive council of the Washington University Medical Center Alumni Association, a member of the Missouri State Medical Association, a board member of the St. Louis Neighborhood Comprehensive Health Center and a member of the U. S. Pharmacopeia panel on radiologic contrast materials and other diagnostic agents.

Dr. Lauren V. Ackerman, professor of pathology and surgical pathology, received the Lila Motley Cancer Foundation Award in New York City on May 1.



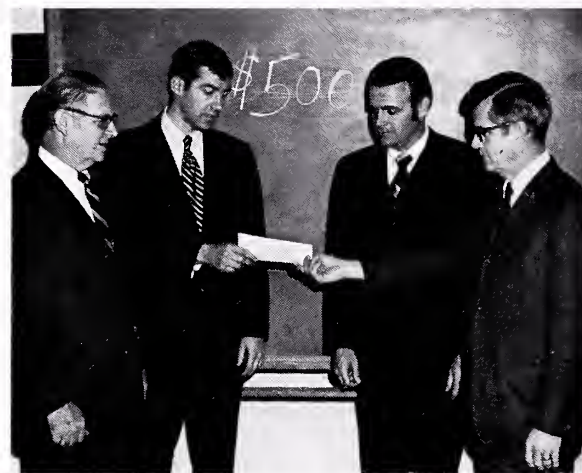
Bernard Becker, M.D., professor and head of the Department of Ophthalmology at Washington University School of Medicine (*right*), received the Missouri Ophthalmological Society's Gold Medallion Award from Society President Robert C. Drews, M.D. at a meeting held in conjunction with the Annual Session of the Missouri State Medical Association in St. Louis in April. Doctor Drews is an assistant professor of clinical ophthalmology at the School of Medicine.

At the annual Peacock Ball in the Plaza Hotel, Princess Shahrezad, niece of the Shah of Iran, presented Doctor Ackerman with the Shabanou Medal and \$5,000. In October, the Foundation will send Doctor Ackerman to Iran for an exchange of ideas in the cancer field. He also will lecture on his research at the six medical schools and will visit hospitals and clinics.

Dr. Leslie Wise, associate professor of surgery, has been honored by his appointment as a Hunterian Professor of the Royal College of Surgeons, England. He will hold the professorship for the year 1971.

On April 15, Doctor Wise delivered a Hunterian Lecture in London before the Royal College of Surgeons. His title was "Peptic Ulcer: A Reappraisal of Its Etiology." During his trip, he also delivered lectures at the University College Hospital and at St. Thomas Hospital, both in London.

St. Louis County Society Gives \$500 to Narcotics Commission



Mr. Tim Norbeck (*second from left*), St. Louis Regional Director of the American Medical Association and a member of the St. Louis County Narcotics Commission, and Mr. Jack Lucks (*right*), president of the Commission, show a check for \$500 from the St. Louis County Medical Society to Prosecuting Attorney Gene McNary, who formed the Commission and serves on its Board of Directors. Dr. Jack Eidelman (*extreme left*), President-Elect of St. Louis County Medical Society, explained that the money given to the Narcotics Commission will be used in a campaign to reduce the use of harmful drugs in St. Louis County.

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Missouri Medicine in Review



FORTY YEARS AGO

Our MSMA members in Jasper County earned the gratitude and admiration of every physician who attended the 74th Annual Session of our Association in Joplin on May 11-14 for the generous hospitality extended and the close cooperation with the officers in making the meeting one of the most successful we have ever held.

The amendment to the Constitution providing for three vice-presidents, which was introduced at the Hannibal Session, was adopted. The By-laws were amended so that applicants who "reside or practice" in a Missouri county may be elected members. This change was made to establish the legality of membership for those who live in contiguous states in which they are not licensed to practice and, hence, are not eligible to become members in those states.

At the open meeting on Tuesday evening, Dr. Morris Fishbein of Chicago, the editor of *The Journal of the American Medical Association*, delivered a stirring address entitled, "The Trend of Medical Practice." For 50 minutes, he held an audience of about 500 people in close attention to his instructive and entertaining remarks.

Dr. Joseph W. Love, Springfield, was elected President-Elect and Drs. Joseph Grindon of St. Louis, P. D. Gum of West Plains and B. W. Hays of Jackson were elected Vice-Presidents. Dr. George W. Hawkins, Salisbury, was reelected Treasurer and Dr. E. J. Goodwin, St. Louis, was reelected as a Delegate to the American Medical Association.

Attendance at the Joplin meeting was 378.

Jefferson City was selected as the meeting place for 1932.

TWENTY-FIVE YEARS AGO

This is a tribute to the members of the Missouri State Legislature who worked untiringly and at times, it seemed, almost endlessly to make the changes in our laws made necessary by the new Constitution. The voters of Missouri adopted the new Constitution for the state on Feb. 27, 1945. Included in the new Constitution was a provision requiring the Legislature to create a new Department of Public Health and Welfare. Also, included was a provision that all agencies, boards, bureaus and commissions of the state be consolidated into not more than 14 individual departments. Considering the fact that there existed some 100 different agencies handling the multiplicity of detail in our state government, it becomes apparent that the framers of the Constitution left a job of no small proportions for the State Legislature.

The first postwar meeting of the Central Missouri Clinical Society was held in Columbia on May 16 and was sponsored by the Boone County Medical Society. Dr. Claude R. Bruner, Columbia, was elected president.

TEN YEARS AGO

On the occasion of the 25th anniversary of the establishment of the St. Louis Group Hospital Service, Inc. of St. Louis, a certificate of appreciation was presented to Carl F. Vohs, M.D., St. Louis. Doctor Vohs was chairman of the Committee on Medical Economics of the MSMA for many years and was President of the Association in 1957.

The regular meeting of the Greene County Medical Society was held on March 24 at Calli's Half-A-Hill with 47 members and one guest present. Dr. Stanley S. Peterson, President-Elect, presided.—The St. Louis Orthopedic Society recently elected Dr. Ralph K. Earp as president. Dr. Vilray P. Blair was elected vice-president and Dr. George E. Sheer was elected secretary-treasurer.

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Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other

antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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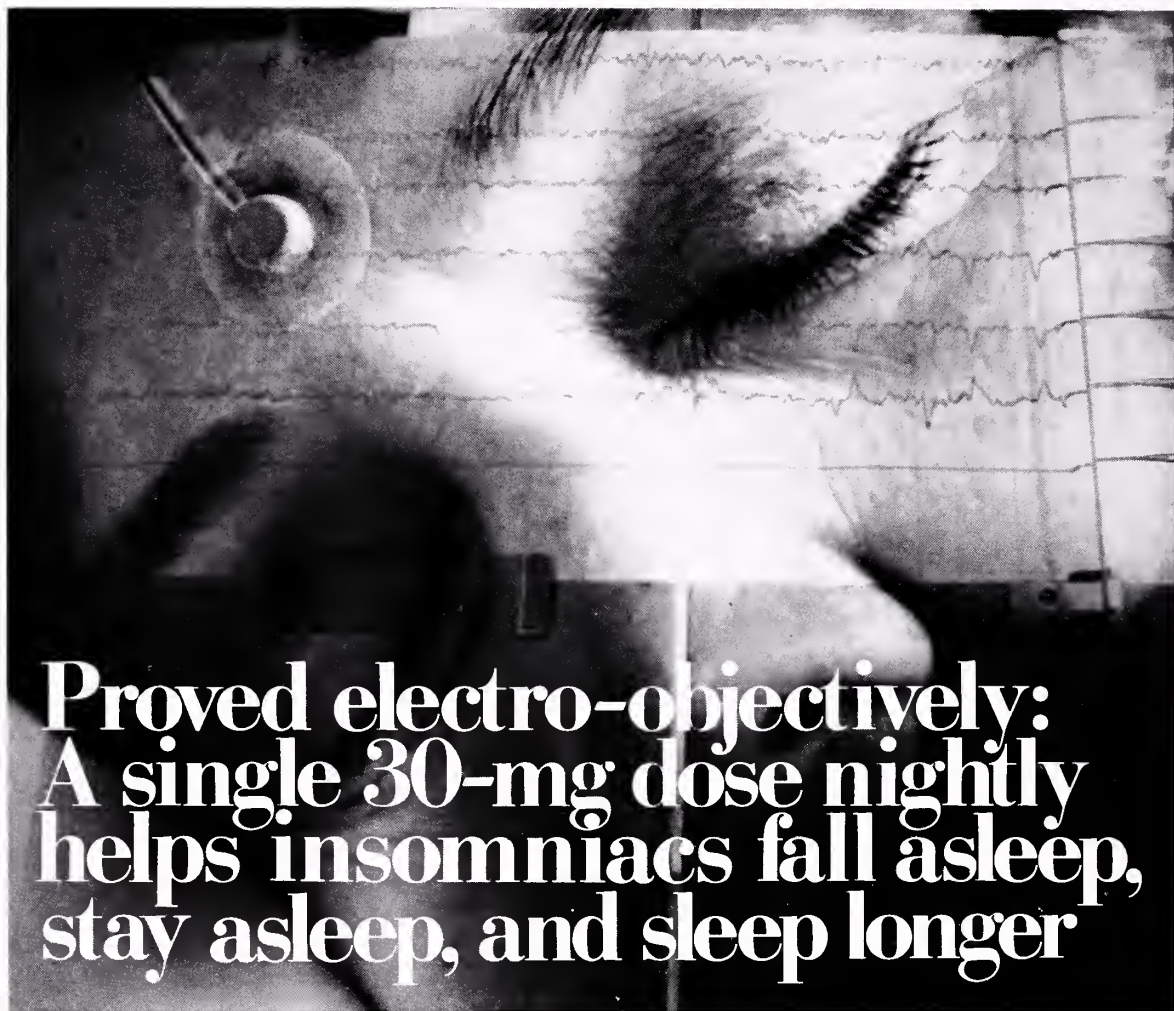
Special Report:

ACTIONS and EVENTS
of the
Missouri State Medical Association

113th ANNUAL SESSION

See Contents on Page 417

114th Annual Session
April 6-9, 1972, Kansas City



Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro-oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.^{1,2,3}

Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,¹ Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.

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Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

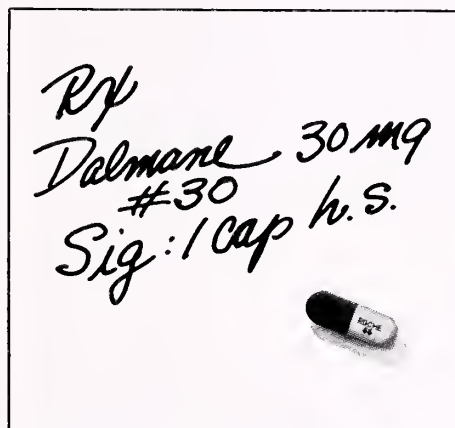
Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

In summary, Dalmane is useful in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. It can be used effectively in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep.

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References: 1. Kales, A., et al.: "Effectiveness of Sleep Medications: All-Night EEG Studies of Hypnotic Drugs," in Proc. 7th Internat. Cong. Electroencephal. and Clin. Neurophysiol., San Diego, Calif., Sept. 13-19, 1969. 2. Kales, A., et al.: "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," in Kales, A. (ed): *Sleep: Physiology and Pathology*, Phila., Lippincott, 1969, p. 331. 3. Data on file, Medical Department, Hoffmann-La Roche Inc.



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Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdose, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.



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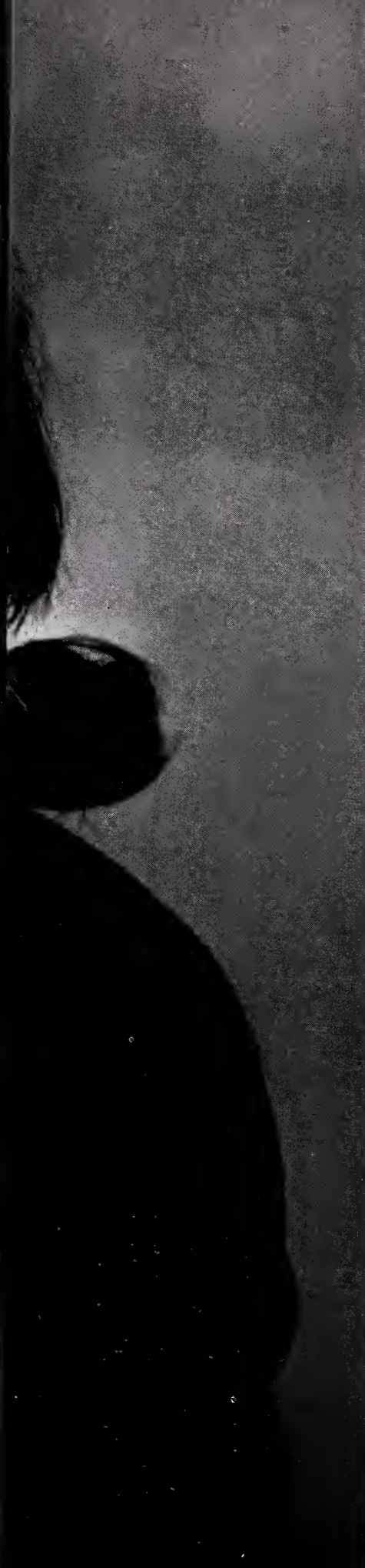
Hygroton[®] chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* Hypersensitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and nursing mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic termination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte balance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypotension, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other day. *How Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G For full details, please consult the complete prescribing information.

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"Medicine . . . stands at the crossroads today."

Remarks of

Joseph L. Fisher, M.D., President



Joseph L. Fisher, M.D.

Mr. Speaker, Members of the House of Delegates and Guests:

One year and 11 days ago, I stood before this body and asked for your help in order that we might make our State Medical Association work from the "Bottom-Up" throughout this year.

As you know, this is the first year of operation for our present committee and commission structure as set forth by the new Bylaws adopted by you at the last Annual Session. We have had some growing pains, but I have been amazed and overjoyed at the enthusiastic reception of the members who have been asked to serve on these commissions and committees as well as all of the "AD HOC Committees."

I want to take this opportunity to thank all of you for your support and contributions throughout the past year.

Those of you who previously have been active in organized medicine in our state will no doubt note in the reports of the commissions the result of a more cohesive, enthusiastic and active participation in the programs and problems that arose, during the year, which has seldom been equalled in the past. This coordination of effort and thought-

ful activity certainly will serve to strengthen our organization and lead to more rapid and greater progress.

After visiting with a number of you during the past year, I am impressed by your interest and up-to-date awareness of the current problems of medicine. I cannot help but contrast the awareness of the House today with that of 16 years ago when I first became Speaker of this House. Many members at that time would arrive without any knowledge regarding the current problems and with little instruction from their constituents. I can recall when there was no "Delegates Handbook" and only the Speaker and the Executive Secretary were aware of the order of business of the House and some of the topics to be presented.

In order to facilitate the work of the House and obtain more "feed-back" from a better-informed membership, I, as Speaker, together with the assistance of Tom O'Brien and Helen Penn, formulated the first written instructions to the House. This consisted of a single, mimeographed sheet which was placed on each chair prior to the convening of the first session. From that single sheet has evolved your "Delegates Handbook" which

sets forth in detail most of the information you need to efficiently transact business. However, complacency is not the order of the day and I would urge you to continue to press forward for there is a tremendous amount of work to be done to improve ourselves, especially in the area of socio-economics and medical practice patterns.

At the national level, the physicians of this country have proposed the "Medicredit Plan," the intent of which is to give every person in America under the age of 65 *equal access* to high quality medical and health care regardless of ability to pay.

At the same time, the physicians of America are cautioning our legislative bodies against Health Insurance proposals that are too costly and cannot be made to work efficiently from the medical standpoint *and* whose tax lug would eventually break the backs of the American public.

At the mention of legislators, the State and National PAC movements immediately come to mind. I am sure I do not need to stress the importance of legislation to the membership of this House. I would not only urge you, but, also request that you get your friends to support the State and National PAC movements. This does not only mean the contribution of monies, which is the very life blood of these movements, but it also implies "getting to know" and working with your state and national representatives both in the House and the Senate. Never has this type of close contact been as important as it is today. Increasing PAC membership is a bedrock priority which will enable us to put medicine's friends in Congress as well as in our State Legislature. We can be proud of Missouri this year for we were third in AMPAC's overall categories. This is largely due to the adopted policy of joint billing by most of our county societies.

In Missouri, we have developed a "Key Man Program." This has worked quite well in many instances with one physician who is a close friend of the legislator carrying the profession's story to a "receptive ear." We need to make these bonds stronger with a more visible program which involves more physician support. This is the only way we can hope to ever favorably influence those who do not completely agree with our viewpoints.

Last year, I urged this House to consider the philosophy of lifelong postgraduate study by all physicians and to carefully consider mechanisms to develop programs and incentives for such postgraduate study. You, no doubt, have reviewed the report of the Commission on Continuing Education and Health Manpower as well as the report of the special AD HOC Committee on Continuing Medical Education, whose recommendation is that continuing education remain voluntary at this time but that we should continue to work toward consideration of a compulsory requirement for membership in MSMA. This area needs your continued study in an effort to combat the charges of the Depart-

ment of Health, Education and Welfare that there is a great deal of *unevenness* in the quality of medical care throughout this country. Peer Review will tend to straighten this out by virtue of its quality control influences. Continued intercourse in conversational tones, rather than shrill voices and vehement exclamations of strong and derogatory feelings, will be necessary to affect a solution in these areas.

On several previous occasions, I have discussed with young physicians throughout the state, as well as the Council of MSMA, the formation of "House Staff Organizations" with elected delegates from these organized groups of young physicians sitting on this House floor with full delegate privileges. The organization of three groups of this type, one in St. Louis, one in Columbia and another in Kansas City, would cover nearly all of the interns and residents in the formal training programs and would certainly give us closer liaison between this young group of physicians who are about to launch their destinies into the field of medical practice and who, hopefully, will shortly become leaders of our Association.

Most of you know of the recent meeting on March 18-20 in St. Louis where a 23-member committee was selected to meet in Chicago on May 1-2 to serve as a coordinating committee to formalize a National Association.

One youthful physician attending the St. Louis meeting is quoted as having said, "One reason we feel an urgent need for this kind of organization is because it is increasingly obvious that some kind of health legislation is going to emerge from Congress soon and someone other than the American Medical Association should have an input into that Legislation." I must agree that we need all the help we can get, as well as all of the ideas available, plus constructive criticism. I am sure our duly-elected AMA representatives will be happy to listen to anybody with a good idea that will assist the members of our profession to provide better medical care to the patients all of medicine seek to serve. We need these young physicians in our group; we certainly do not need them as a splinter organization.

The best way for medicine to become effective is for all of the profession to speak with one united voice so that the confusion which existed at the "Tower of Babel" may be avoided.

Never before in the history of American Medicine has the selection of capable leaders been as important as it is today. Careful, unbiased, deliberate selection of inspired and capable men who can lead our profession and tell medicine's story *well* may be our salvation.

Most of you have been involved to a greater or lesser degree with councilor district meetings which, for the most part, have been well attended. Such meetings have bridged respective county society boundaries, offering a greater chance for

comradeship, and have provided a mechanism for the presentation of a different type of program related to the legislative problems of medicine as well as some of the socio-economic problems. It would be my hope that you would request your councilors to continue such meetings.

This year's County Society Officers Conference was most successful and certainly provides a way to bring the leaders at the county level to fully realize the importance of the activities of our State Association. This seems to me to be a worthwhile endeavor.

With the annual session of the State Legislature, the work load for our executive staff in Jefferson City will be at least doubled and perhaps tripled. In spite of the fact that our Jefferson City staff is a hardworking efficient group that is doing a good job, this additional load will require more help to take care of the many details arising from this one facet of our Jefferson City responsibility. You can anticipate additional expenses which will necessitate an increase in dues in the not too distant future. I am happy to report that we are still in the black *this* year and according to our most able treasurer, Dr. Max Franklin, I quote, "With a Scotch Executive-Secretary and Jewish Treasurer what else can you expect!"

The Missouri State Medical Foundation with its Medical Student Loan Program continues to receive more requests for loans from resident Missouri medical students than the Foundation can grant. The Woman's Auxiliary to our Association this year has done a magnificent job for the Loan Foundation and has raised a good deal of money. However, it is still necessary that we ask the membership to continue to assess themselves \$10.00 per capita to maintain available monies to assist these needy medical students. Memorial gifts are an excellent and greatly appreciated way to add to this fund.

As most of you know, the Missouri State Medical Association, in conjunction with the Missouri Association of Osteopathic Physicians and Surgeons, has established the "Health Care Foundation of Missouri" for Statewide Peer Review. This foundation provides a mechanism for assuring the public and third party carriers that the medical profession is responsibly concerned about providing economic and effective medical service for the people of Missouri. Physicians are the only persons who can judge the performance of other physicians fairly. There are Peer Review mechanisms which are performing well in our state today. However, as we plan today for tomorrow, we must have an overall state organization under whose umbrella the subgroups must function if we are to successfully deal with third party carriers especially at the federal level.

As corporate boards and presidents of large busi-

nesses must answer to their stockholders, we have an obligation to answer to the public.

Again, I must emphasize that the Health Care Foundation is set up in such a way as to (1) assess quantity of Medical Services; (2) assess quality of Medical Services; (3) evaluate cost of Medical Services; (4) in evaluating the former three, hopefully, an educational program can be developed in an effort to ascertain areas of weakness among our membership where postgraduate or continued medical education will be most helpful; (5) a Judicial Committee also has been established whereby chronic offenders or abusers of professional privileges can be appropriately dealt with; and last but not least, (6) a State Peer Review Organization which is strong, will have the mechanism whereby a single individual physician who is in trouble with a third party carrier concerning any one of the first three objectives can appeal to his Peers for assessment of his professional performance. If in the eyes of his Peers his performance is fitting and proper, this physician will have, for the first time in the history of our state organization, a strong arm of the total medical community to support his position so that final settlement with an intermediary will be palatable.

A foundation of this type offers our best, and perhaps even our last, chance to keep medicine as a part of the "free enterprise system."

Medicine in this regard stands at the crossroads today. If we cooperate and if we run a tight ship, there will be a great difference in what goes on "sign posts" at the crossroads and, also, we may be able to determine "who does the painting."

We have climbed on the "Peer Review bandwagon." It's going to take a lot of work on the part of nearly every physician in the state of Missouri to make it operate successfully. We must forsake the philosophy of "Watch and Wait" and move forward with positive programs of this type if we are going to maintain our position as leaders in the health care field. In these uncertain times of rapid changes, it's a rare day that something regarding Medical Services or Health Care cost does not appear in the newspaper, usually on the front page. It is true that physicians receive only 18 cents of the Health Care dollar, but we are responsible for the dispersement of 85 cents. Therefore, we are frequently open to criticism in areas which we do not control. It is imperative that we learn to swim fast and stay abreast of this *flood* of criticism and proposals for change.

You and I have a great deal in common—we love medicine! The profession has a rich heritage to live up to and a great future to strive toward. Let us continue to work together to achieve our goals.



Gerald L. Miller, M.D.

"One of the great challenges of medicine today is the challenge of assimilating the young physicians."

Remarks of

Gerald L. Miller, M.D., President-Elect

Mr. President, Officers, Delegates of the Missouri State Medical Association and Friends:

Following my good friend and predecessor, Joe Fisher, is not an enviable assignment. Doctor Fisher has had a long and illustrious career in the service of society generally, his local community, the medical profession and individual physicians of this state. The past year has been a difficult one for the Missouri State Medical Association. Doctor Fisher, I want to thank you and commend you for the leadership which you've given us during that year.

Behind the President of this Association is a long and honorable heritage. Working with the President is a capable and responsible Executive Council and a truly dedicated staff. Completing the picture is the support, cooperation and encouragement of the individual member-physicians of this Association. With a team so unified in purpose and dedicated to the principles of our profession, I am confident that we can meet and resolve any of the problems which may face us in the year ahead.

Traditionally, the President-Elect of the Missouri State Medical Association is expected to make specific recommendations for the coming year. I choose, rather, to call your attention to several areas in the broad spectrum of medicine which, I believe, need emphasis.

Our profession and the system which it represents are being severely challenged. The critics are quite vocal in calling attention to the obvious shortcomings of our health care system. They also are quick to offer their own miracle nostrums which will eliminate all of the shortcomings overnight. It is little wonder that many dedicated and informed physicians are tempted to withdraw from the arena of health care and leave it to these socioeconomic politico quacks.

Contrary to the opinion of these would-be miracle makers, I firmly believe that we have the greatest health care system in the world. Admittedly, it has its weaknesses.

Health care has not been accessible to many of our citizens. The ever-increasing cost of health care is of real concern to both physician and patient alike. As physicians, we must be in the forefront

of efforts to solve these problems. Also as physicians, we must demand that the solutions to these problems do not compromise quality of health care.

Needless to say, I am honored and humbled by the office you have bestowed upon me. Also, I am awed by the complexity of the socioeconomic issues which face our profession today. The pressures for change in our health care system might be categorized as scientific, social, governmental and economic. These pressures are directed to four basic problems: Health manpower, health facilities, distribution of health services and financing of health care.

Last month, Ned Parrish, Executive Vice-President of the National Association of Blue Shield Plans, in testifying before the Subcommittee on Health of the Senate Labor and Public Welfare Committee, stated that "any radical change not based on needs, resources and specific circumstances of a given area or community would result in a breakdown of health care delivery." He further stated that the nation does not have a non-system of health care delivery, but a series of systems, which are sometimes competitive, usually complementary and almost always based on previous stated needs and circumstances.

Walter McNerney, President of the Blue Cross Association, in testifying before the same committee, urged that the pluralistic system of American medicine be preserved. Blue Shield and Blue Cross, although on occasion standing at odds with the medical profession, have for well over three decades been allies of medicine and have concerned themselves in delivering a top product to their subscribers, our patients. Despite our occasional differences, we need to work closely with the Blue plans.

Doctors need to know more about the functions of hospitals and need to be represented on Blue Cross and hospital boards. In Blue Shield, a continuing strong physician representation on the governing boards is essential with strong, aggressive medical support for the development of high quality, comprehensive prepaid health care plans.

National health insurance currently is a major topic of conversation in both governmental and

nongovernmental circles. Congress has before it so many health care bills that it's virtually impossible to remember the details of all of them.

At one extreme is a proposal that would completely reorganize the medical and health care system in this country, pressing it into a nice, neat bureaucratic mold which, according to its backers, would produce a panacea. The estimated price tag on that particular Utopia is \$75 billion, a figure which probably is very conservative. Other proposals, less sweeping and less ambitious, would attack the health care problems in different ways. Most of them would work within the existing structures of medicine, health care and insurance and would encourage existing agencies and organizations to solve the problems through open competition.

It is impossible to say what will emerge from Congress as the final version. But, undoubtedly, it will be a compromise program, perhaps utilizing individual aspects from various proposals. It is encouraging to note that Congress' hearing aid appears to be tuned to the voice of medicine for the first time in several years. This probably is the result of two developments.

First, there are many in government who recall that organized medicine warned our elected officials that Medicare and Medicaid would not solve all of the problems which they were supposed to solve and, indeed, might create new problems. The entire nation has seen that warning come true. It is only logical, therefore, that Congress will give more credence to the opinions of the medical profession in considering new legislation.

The second factor, which has turned the ear of Congress to medicine, is the American Medical Political Action Committee (AMPAC) and its component state and local organizations. Those of you who have taken the time to investigate know that AMPAC has run up an enviable track record. AMPAC, through its candidate support programs, has brought about an amazing change in Congressional climate and has made possible a more effective AMA lobbying effort. I urge you to continue your support of AMPAC and the Missouri PAC. Carry this message back to your constituent societies.

Also, relay to the members of your local medical communities the need for real and continuing communication with elected officials at all levels of government. It is obvious that government is going to have an expanding role in at least the financing of health care. Through rational objective communication we must inform elected officials and government agencies as to the most effective and economical way of financing care without jeopardizing quality.

The most disturbing health care problem to me is that of manpower. An increasing and aging population, the concept that health care is the right of all individuals, new and expanded health services,

advances in the science and technology of medicine—all are demanding more manpower.

We are on the way, at least, to solving the physician shortage with a projected 20,000 medical school graduates per year before 1980. Members of the Missouri State Medical Association individually and collectively should take pride in the actions which their Association has taken to encourage the training of more doctors. Your Association established the Missouri State Medical Foundation for the express purpose of providing low interest loans to medical students. Through your contributions, the principal investment fund for that program now exceeds \$300,000. Not only does the Foundation encourage young Missourians to go into the study of medicine, but it also encourages them to practice in Missouri when their education is completed.

We also should note with pride the role of our Association in assuring the establishment of a new University of Missouri School of Medicine in Kansas City. In due time, the new School will not only be producing well-trained physicians, but it also will be making available to the community new allied health professionals and will be offering to the practicing physician the means by which he can update his professional knowledge and sharpen his professional skill.

Incidentally, one of the great challenges of medicine today, I believe, is the challenge of assimilating the young physicians. They are a vital force in the scheme of things and, in due time, will inherit the system which we have helped to build. I believe that we should accept this younger generation of doctors and doctors-to-be not as a challenge, but as a stimulus. Their questions can inspire us to new investigation and new thinking. Their enthusiasm can wash away some of the apathy and complacency which comes with age, and their idealism can revive in us some of the dreams and aspirations of our younger days. We should be working with these young people from the pre-medical school level right up through internships and residencies. Where appropriate, I would urge your individual county medical societies to make these young men and women a part of your organization.

In my opinion, the most important task which you placed on the shoulders of Dr. Joseph L. Fisher last year was the direction to implement a statewide peer review program. Your President and Executive Council have, in a relatively short time, carried out your mandate through creation of the Missouri Health Care Foundation. The Foundation's first Chairman, Dr. Hector W. Benoit, Jr., will report later this afternoon on the conception, gestation and delivery of this infant organization.

Gentlemen, I would like to say at this time that in my opinion the Foundation represents professionalism at its highest level. The primary concern

(Continued on page 429)



Mrs. William M. Walker

"We always stand ready to help aid in the improvement of the health and welfare of the citizens of Missouri."

Report of Mrs. William M. Walker, President of the Woman's Auxiliary

Mr. Speaker, Mr. President, Members of the House of Delegates and Guests:

One of your members once told me that when my turn came to address you, I should say "hello" and "goodbye" and sit down. I must confess that I gave serious consideration to his suggestion, but working with your wives for 12 years made me realize this would be doing both you and the Auxiliary an injustice. You have invested too much time, effort and money in the Auxiliary not to be told—at least, briefly—of our activities and accomplishments during the year 1970-1971.

First, we have made many new contacts in the news media which have resulted in excellent and greater publicity for many of our projects and activities. This publicity has created, in turn, a positive reaction in public relations when our name is mentioned. There are many state agencies, organizations and news media who are aware for the first time that there IS a Woman's Auxiliary to the Missouri State Medical Association, that we are an active and working organization and that we always stand ready to help aid in the improvement of the health and welfare of the citizens of Missouri.

Second, on the state and county levels, our members have carried out projects in health careers recruitment, given many health career and nursing scholarships, raised funds for the Missouri State Medical Foundation amounting to more than \$1,000, contributed substantial funds to AMA-ERF, recruited blood donors, given programs on drug abuse, worked on international health activities, worked to establish better mental health and contributed to other areas of community health for a total of more than \$14,000 contributed in the name of the Auxiliary. In short, gentlemen, we have tried to honor you and your profession in every positive way every day, including Doctor's Day.

Third, at your request, we initiated an entirely new project, Environmental Health. We are proud to be able to present the results of our efforts to you at this meeting. You, too, should claim some credit for this achievement because you have contributed funds and professional expertise to help ensure its success. Our committee, working also with

the University of Missouri Extension Division, has accomplished three objectives for this project: (1) We have completed a survey of the buying and living habits of the doctors' families in Missouri as well as a survey on what counties are doing about their environmental problems; (2) we have developed a package program on the problems of the environment which includes bibliographies, audio-visual aids, fact sheets, etc. to be used by the individual woman in her home or as an active volunteer in her community; and (3) we have prepared two exhibits for this convention—one for you and one for us—so that you also can be well informed about the project. Please take time to view our Environmental Health Exhibit at Booth 19.

Our Environmental Health Committee is in the process of achieving a fourth objective. We are sponsoring a statewide Workshop on Missouri's Environmental Health on May 11 in Columbia for the top leaders of all state women's organizations in Missouri. This workshop will introduce our package program to them and give them the opportunity to meet with professionals in the areas of air, water, solid waste, population, conservation and education. This workshop should provide many benefits for both the professionals and the volunteers. Actually, our work on the environment has been unique in its approach and, as a result, we are already receiving inquiries about the project from our National Auxiliary who is considering a project on this same subject. The Federated Women's Clubs of Missouri, with a membership numbering more than 14,000, have adopted our package program as their state project for the year beginning April 22, 1971, and we expect more women's groups to do so after the workshop in May. To paraphrase a popular song, "This Could Be the Start of Something Big!"

I would be remiss if I didn't share one of our problems with you because I think you can very well be an important part of the solution. Several of you have said to me this year, "I've never encouraged my wife to be active in the Auxiliary because I didn't realize your work is really important until now."

I'm thankful that we've reached some of you and

I hope my message today will reach and interest more of you. There are many areas of the state where there are no county auxiliaries, but even this is no excuse for a doctor's wife not to be a member of the State Auxiliary. We have a category for members-at-large with dues of only \$6. Our fondest dream is for our State Auxiliary membership to coincide 100% with the married MSMA membership. At the present time, our membership is only 45% of yours. If you honestly believe in the Auxiliary, won't you help us achieve this goal? Women's lib notwithstanding, it has been my experience that most doctors' wives want to do their best for their husbands in every way and if their husbands

say, "I hope you'll join the Auxiliary," 99 times out of 100 the wives will do so.

Until that dream is realized, we *can* say that our 1,800 members have achieved much this year and we are always ready to continue our efforts on your behalf. Your invitations to attend your Council meetings, conferences and committee meetings has given us insight into your goals and we are trying very hard to educate our membership about the problems facing medicine today.

Thank you for all you have done for the Auxiliary and thank you for all your many thoughtful courtesies to me. Please accept our very best wishes to each of you for a most successful convention.

Remarks of President-Elect

(Continued from page 427)

of the Foundation will be quality medical care for all of our patients, the citizens of Missouri. By-products will be professionally-established cost control, efficient and effective utilization of facilities and more meaningful professional education. I urge your close attention to Doctor Benoit's report, and I plead for your total participation and cooperation in the Foundation activity.

During the past quarter of a century, the medical profession has been involved in some of the greatest scientific and technical advances in the history of man. At the same time, however, the unity and common purpose which once served as a hallmark for our profession have been fractured and fragmented. We have voluntarily divided ourselves by specialty societies, hospital staffs, research groups and university faculties. In the midst of an era of political, economic and social turmoil, we have done what no sane military general would do; we have split our forces or, in the words of Walt Kelley's Pogo, "We have met the enemy and they are us."

At the beginning of this message, I said I would make no recommendations. With your permission, however, I would like to revise that and say that I will make one recommendation and will urge you to give serious and wholehearted consideration to it.

I recommend that in the year to come, we all turn our attention to reducing the fragmentation that has occurred in organized medicine and that we minimize our specialty, hospital, institution and similar parochial loyalties, remembering that all of us are first and foremost Doctors of Medicine! I am not suggesting that there is no need for medical

specialties, hospital staffs, medical research or medical education. Doctors are going to have to be involved in and participate in all of these. I *am* proposing that our primary loyalties should be to the organizations which represent all of us—the County Medical Society, the State Medical Association and the American Medical Association. Only through these organizations can all of the voices of medicine be heard and only through these organizations can the will of the majority of physicians in this country be expressed.

Working together in this fashion, I am confident that we can solve the complex medical and health care problems which face us. I also am confident that only through a united front can we resist the many outside pressures which are being brought to bear upon our profession. I suggest that professional unity, together with the rededication to the basic principles and concepts of the medical profession, serve as the theme of the Missouri State Medical Association in the year 1971-1972.

Now in closing, I would like to share with you the words of an anonymous author, which are inscribed on a plaque on a wall in my office. May these words serve as a guide for all of us during the forthcoming year:

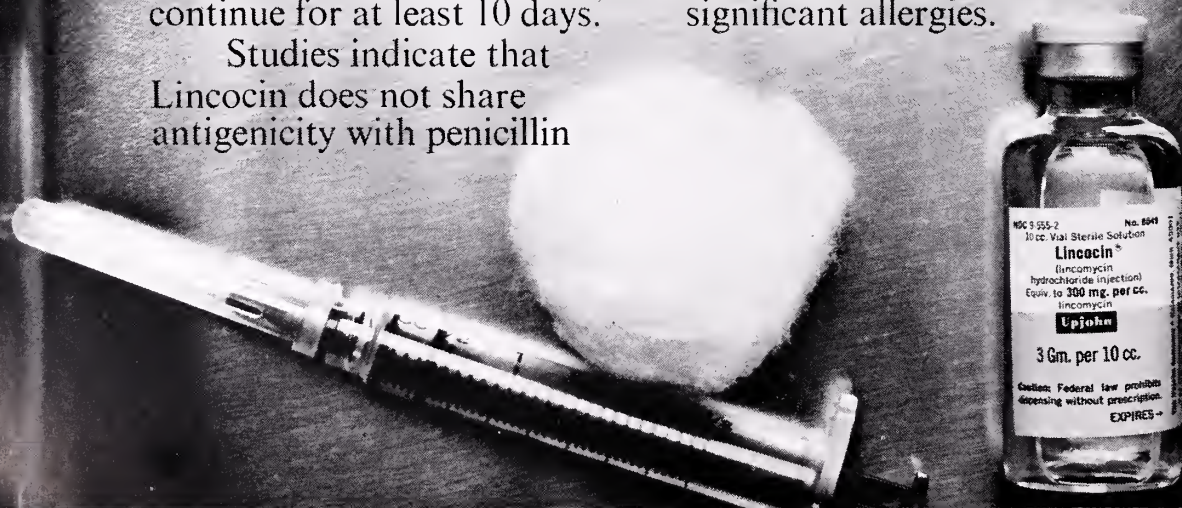
"Take time to think—it is the source of power.
Play—it is the secret of perpetual youth.
Read—it is the fountain of wisdom.
Pray—it is the greatest power on earth.
Be friendly—it is the road to happiness.
Love—it is a God-given privilege.
Laugh—it is the music of the soul.
Give—it is too short a day to be selfish.
Work—it is the price of success."

Hypersensitivity to penicillin is a good reason to consider Lincocin® (lincomycin hydrochloride)

Lincocin (lincomycin hydrochloride, Upjohn) has produced a high percentage of satisfactory responses in patients with mild, moderate and severe infections due to susceptible streptococci, pneumococci and staphylococci (including many penicillinase-producing strains). With β -hemolytic streptococcal infections, treatment should continue for at least 10 days.

Studies indicate that Lincocin does not share antigenicity with penicillin

compounds. However, hypersensitivity reactions such as angioneurotic edema, serum sickness and anaphylaxis have been reported, some of these in patients known to be sensitive to penicillin. As with any antibiotic, Lincocin (lincomycin hydrochloride, Upjohn) should be used cautiously in patients with histories of asthma or other significant allergies.



So is penicillin-resistant staph.

Lincocin (lincomycin hydrochloride, Upjohn) has been demonstrated to be effective in susceptible penicillinase-producing staphylococcal infections resistant to penicillin (including ampicillin). However, resistant staphylococcal strains have been recovered; resistance appears to occur in a slow stepwise manner. As with

all antibiotics, susceptibility studies should be performed.

Intramuscular and intravenous injections of Lincocin (lincomycin hydrochloride, Upjohn) are generally well tolerated. Instances of hypotension following parenteral administration have been reported, particularly after too rapid intravenous administration.

Sterile Solution (300 mg. per ml.)

Lincocin[®]

(lincomycin hydrochloride,
Upjohn)



Lincocin®

Sterile Solution (300 mg. per ml.)

(lincomycin hydrochloride, Upjohn)
for respiratory tract, skin, soft-tissue, and
bone infections due to susceptible
streptococci, pneumococci, and staphylococci

Each preparation contains: Lincomycin hydrochloride monohydrate equivalent to lincomycin base

250 mg. Pediatric Capsule 250 mg.
500 mg. Capsule 500 mg.

*Sterile Solution per 1 ml. 300 mg.

Syrup per 5 ml. 250 mg.

*Contains also: Benzyl Alcohol 9 mg.; and, Water for Injection—q.s.

An antibiotic chemically distinct from others available, indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed.

CONTRAINDICATIONS: History of prior hypersensitivity to Lincocin (lincomycin hydrochloride). Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: Cases of severe and persistent diarrhea have been reported and at times drug discontinuance has been necessary. This diarrhea has been occasionally associated with blood and mucus and at times has resulted in acute colitis. This reaction usually has been associated with oral therapy, but occasionally has been reported following parenteral therapy. Although cross sensitivity to other antibiotics has not been demonstrated, make careful inquiry concerning previous allergies or sensitivities to drugs. Safety for use in pregnancy has not been established and Lincocin is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or

significant allergies. Overgrowth of non-susceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β -hemolytic streptococci infection for ten days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angio-neurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatment. *Skin and mucous membranes*—Skin rashes, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances.

Cardiovascular—Instances of hypotension following parenteral administration have been reported, particularly after too rapid I.V. administration. Rare instances of cardiopulmonary arrest have been reported after too rapid I.V. administration. If 4.0 grams or more administered I.V., dilute in 500 ml. of fluid and administer no faster than 100 ml. per hour. **Local reactions**—Excellent local tolerance demonstrated to intramuscularly administered Lincocin. Reports of pain following injection have been infrequent. Intravenous administration of Lincocin in 250 to 500 ml. of 5% glucose in distilled water or normal saline has produced no local irritation or phlebitis.

HOW SUPPLIED: 250 mg. and 500 mg. Capsules—bottles of 24 and 100.

Sterile Solution, 300 mg. per ml.—2 and 10 ml. vials and 2 ml. syringe.

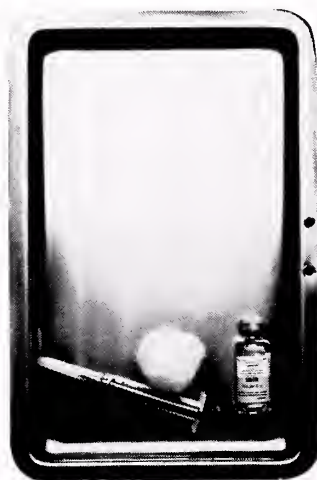
Syrup, 250 mg. per 5 ml.—60 ml. and pint bottles.

For additional product information, consult the package insert or see your Upjohn representative.

JA71-1203 MED B-5-SR (KZL-6)

The Upjohn Company
Kalamazoo
Michigan 49001

Upjohn



MSMA - Supported Bill Signed By Governor

Missouri Governor Warren E. Hearnes has signed into law Senate Bill 7 which provides that the transfusion of blood and the transplantation of organs are a service not a sale and that there is no warranty implied. The law becomes effective on September 28.

The measure was one of the key bills in the legislative program of the Missouri State Medical Association during the first regular session of the 76th General Assembly. The second regular session starts next January. Whether there will be a special session is still in doubt.

Another measure of interest to Missouri physicians, House Bill 301 which provides new board and staff rules for county and regional hospitals, was approved by the General Assembly and awaited the Governor's signature as of June 17.

There are still some questions concerning the fate of House bills which were neither passed nor killed during the 1971 session. The Senate has left little doubt concerning the fate of bills under its control by tabling them all, thus killing them. The House has adopted rules whereby all bills under House control have gone to the Speaker of the House and he can assign them to committees in January as he sees fit. The Senate has left the strong impression that even if such bills would be passed by the House next year, they would be killed by the Senate.

House Bill 79 which would have made revisions in the chiropractic practice act was among those bills which at the end of the session remained on the House Perfection Calendar. Thus, it along with other bills on that calendar and all others under control of the House have been turned over to the Speaker of the House.

One measure of interest to all those concerned about legislation did pass the General Assembly and will allow the preintroduction of bills during the month of December this year for consideration during the second session of the 76th General Assembly. This preintroduction of bills could speed up the legislative process next year. The Legislature will be in session four and one-half months next year compared to five and one-half this year.

Another bill which had solid backing of the medical profession has also been signed into law by the Governor. This one, House Bill 73, allows physicians to treat minors without parental consent in cases involving venereal disease, pregnancy and drug abuse. The bill provides protection for the physician treating minors and leaves to the physician's discretion whether or not he informs the parents.

Other bills of medical interest which were approved by the General Assembly included:

Senate Bill 69 provides new drug laws for Missouri and calls for administering of the act by the Missouri Division of Health. The bill is modeled on recent federal legislation in this field and has as its aim to help combat problems of drug abuse.

House Bill 17 extends Medicaid to include diagnostic visits of welfare patients under 21 and

also provides home health care services for all eligible for Medicaid. Passage of the measure was important because it was needed to comply with federal standards. An attempt to amend the bill to provide more money to pay for nursing home care lost out on the final day of the session.

House Bill 214 permits Doctors of Medicine and Doctors of Osteopathy to jointly form a professional corporation.

Senate Bill 363 raises the Director of the Division of Health's salary to \$35,000. Salary has been at this level but only by calling the director "Acting."

Senate Bill 108 provides for the creation of ambulance districts in the state.

Among measures of interest which were either defeated or not passed by the General Assembly:

Senate Bill 8 would have set a limit of \$50,000 on the tort liability of hospitals and their trustees, directors, employees or volunteer workers. (Left on Senate Perfection Calendar.)

House Bill 238 would have reduced from .15 percent to .10 percent the weight of alcohol present in the blood to indicate whether a driver is intoxicated. (Left on Perfection Calendar.)

House Bill 95 would have changed the malpractice statute of limitations in Missouri from the present two years from the act to two years from discovery. (Remained in Senate Committee after passing House.)

House Bill 147 would have provided for the licensing of psychologists under the Board of Registration for the Healing Arts. (Remained in Senate Committee after passing House.)

House Bill 240 would have provided new safety standards for eye glasses. (Left on House Perfection Calendar.)

MSMA
News

(Continued on back of page)

BILL SIGNED BY GOVERNOR
(Continued)

House Bills 241 and 694 would have prohibited the use of lead-based paint for toys, interior surfaces. (Left on House Perfection Calendar.)

House Bill 280 would have allowed any licensed osteopath who later was awarded a Doctor of Medicine degree from a school accredited by the American Medical Association to have the degree Doctor of Medicine added to his license. (Killed by House vote.)

House Bill 333 would have provided for the licensing of persons fitting and dealing in hearing aids under the Division of Health. (Remained in Senate Committee after passing House.)

House Bill 274 would have provided state aid for Missouri students in private medical and osteopathic schools. (Killed by House vote.)

House Committee Substitute for House Bills 336, 579 and 7272 would have added rubella, rubeola and mumps to the list of immunization requirements for school attendance. (Remained on Senate third reading calendar after passing House.)

Senate Bill 28 would have given Missouri a Good Samaritan Law for physicians and nurses providing emergency care at the scene of an accident. (Died in Senate Committee.)

House Bill 317 would have provided for the licensing of radiologic technicians. (Died in House Committee.)

House Bill 458 would have allowed the payment of chiropractors under Workmen's Compensation. (Bill remained in Committee to which it was assigned.)

Senate Bill 137 and House Bill 583 both would have provided for the regulation of Blue Cross and Blue Shield by the Missouri Insurance Division and the payment of a premium tax. (Both bills remained in the committees to which they were assigned.)

House Bill 650 sought to liberalize Missouri's abortion laws. (Bill remained in committee to which it was assigned.)

House Joint Resolution 39 would have added a phrase to the Missouri Constitution that "all persons from the moment of con-

DR. DONNELL
TO
NEW POST



H. Denny Donnell, Jr., M.D. of Columbia has been named Director of the Bureau of Communicable Diseases of the State Division of Health, Dr. Herbert R. Domke, Acting Director of the Division, has announced. The appointment became effective June 1. The position had been vacant since the retirement last June of Dr. E. A. Belden of Jefferson City.

ception have a natural right to life, liberty and pursuit of happiness and the enjoyment of the gains of their industry." (Bill remained in the committee to which it was assigned.)

House Bill 785 would have given Missouri a broad consent law concerning medical procedures. (Bill left on House Perfection Calendar.)

House Bill 958 would have provided immunity from damages for physicians serving on peer review and utilization review committees. (Bill remained in Committee to which it was assigned.)

Senate Bill 238 would have provided for the licensing of ambulances and ambulance personnel. (Bill remained in Committee to which it was assigned.)

Senate Bill 332 would have provided a medical examiner system for Missouri. (Bill remained in Committee to which it was assigned.)

Senate Bill 157 and House Bill 673 both would have added optometric services to those services covered under Title 19 (Medicaid) in Missouri. (Senate Bill 157 was left on the Senate Perfection Calendar. House Bill 673 remained in House Economics Committee.)

House Bill 457 would have required health instruction at all grade levels in the public schools. (Remained in Senate Committee after passing House.)

MISSOURI MEDICINE
JULY, 1971

HMO's To Be
Topic For
CHP Meetings

The Governor's Advisory Council on Comprehensive Health Planning in Missouri is currently in the process of setting up either three or four meetings in the state for the purpose of providing information concerning Health Maintenance Organizations.

The Council of the Missouri State Medical Association has agreed to be a co-sponsor of these information meetings as a way of implementing the MSMA House of Delegates directive to "carry on an active educational program to disseminate all available information on Health Maintenance Organizations and other health care systems to the medical profession and to the public."

In a letter to the CHP agency accepting a co-sponsorship role for the meetings, MSMA Council chairman E. A. Stricker, M.D., St. James, stressed that co-sponsorship in no way implies any endorsement of HMO's but rather is aimed at making information concerning them available to the medical profession and to the public.

The informational meetings are tentatively scheduled in Kansas City, St. Louis and Springfield during this summer. A fourth meeting may be held in Central Missouri.

House Bill 132 would have made it a misdemeanor for a pharmacist not to note on prescriptions if a preparation may cause drowsiness or sleepiness and the patient should not drive a motor vehicle while under the prescription's influence. (Remained in committee to which it was assigned.)

House Bill 958 would have provided for the licensing of ophthalmic dispensers (opticians) under the Board of Registration for the Healing Arts. (Remained in Committee to which it was assigned.)

Minutes of the 113th Annual Session

MISSOURI STATE MEDICAL ASSOCIATION

House of Delegates Chase-Park Plaza Hotel, St. Louis April 15-18, 1971

FIRST SESSION

The First Session of the House was called to order at 1:30 PM on April 15, 1971 in the Chase Club with E. D. Imes, Speaker, presiding. The following officers, councilors and delegates were present during the 113th Annual Session:

Officers

President Joseph L. Fisher, St. Joseph
President-Elect Gerald L. Miller, Kansas City
Vice-President Rolla B. Wray, Nevada
Vice-President John R. Dixon, Brookfield
Secretary John I. Matthews, Jefferson City
Treasurer Max S. Franklin, St. Louis
Speaker of the House E. D. Imes, Maryville
Vice-Speaker of the
House Robert A. Slickman, Kansas City
Immediate Past-President . Doyle C. McCraw, Bolivar

Councilors

1st District John N. Martin, St. Joseph
2nd District Lysle M. Bach, Hannibal
3rd District Walter T. Gunn, St. Louis
4th District Robert A. Mayer, St. Louis County
5th District James C. Cope, Columbia
6th District William D. Bradshaw, Clinton
7th District R. Allen Chandler, Kansas City
8th District Howard J. McAlhany, Springfield
9th District E. A. Stricker, St. James
10th District ... Eugene T. Hansbrough, Poplar Bluff

DELEGATES

First District

Buchanan Richard V. Riddell, St. Joseph
Buchanan William B. Rost, St. Joseph
Buchanan Ernest E. Wadlow, St. Joseph
Clay Richard P. Bowles, Liberty
Clay Charles I. Fowler, N. Kansas City
Clay C. K. Fotopoulos, N. Kansas City
Grand River Albert D. Cross, Trenton
Grand River Merriam Gearhart, Bethany
Grand River John R. Dixon, Brookfield
Grand River Billy D. Howell, Brookfield
Northwest Henry C. Bauman, Maryville
Northwest E. D. Imes, Maryville
Northwest Frank B. Matteson, Grant City
Northwest Troy O. Morgan, Jr., Albany

Second District

Chariton-Macon-Monroe-
Randolph F. A. Barnett, Paris
Chariton-Macon-Monroe-
Randolph J. E. Campbell, Macon
Chariton-Macon-Monroe-
Randolph F. L. Harms, Salisbury
Chariton-Macon-Monroe-
Randolph R. V. Tompson, Moberly
Lewis-Clark-Scotland Landis Y. Davis, Canton
Marion-Ralls-Shelby Thomas J. Fischer, Hannibal
Marion-Ralls-Shelby Albert Grant, Hannibal
Marion-Ralls-Shelby Stanley Hall, Hannibal
North Central Spencer L. Freeman, Kirksville
Pike Charles Lewellen, Louisiana

Third District

St. Louis City William E. Allen, Jr., St. Louis
St. Louis City Ralph L. Biddy, St. Louis
St. Louis City Robert D. Brookes, St. Louis
St. Louis City Helen L. Bruce, St. Louis
St. Louis City Kenneth Burns, St. Louis
St. Louis City Marshall B. Conrad, St. Louis
St. Louis City Francis G. Duffy, St. Louis
St. Louis City Mark D. Eagleton, St. Louis
St. Louis City Joseph C. Edwards, St. Louis
St. Louis City Richard H. Fallon, St. Louis
St. Louis City Robert H. Felix, St. Louis
St. Louis City Max S. Franklin, St. Louis
St. Louis City Paul L. Friedman, St. Louis
St. Louis City August W. Geise, Jr., St. Louis
St. Louis City Charles R. Gulick, St. Louis
St. Louis City Stanley F. Hampton, St. Louis
St. Louis City Charles A. Jost, St. Louis
St. Louis City Donald Judd, St. Louis
St. Louis City Robert W. Kelley, St. Louis
St. Louis City William Komanetsky, St. Louis
St. Louis City G. Lynn Krause, Jr., St. Louis
St. Louis City Lawrence M. Lawton, St. Louis
St. Louis City J. Eugene Lewis, St. Louis
St. Louis City Francis X. Lieb, St. Louis
St. Louis City William L. Macon, St. Louis
St. Louis City Paul F. Max, St. Louis
St. Louis City R. Bruce McCloskey, St. Louis
St. Louis City Arthur W. Neilson, St. Louis
St. Louis City Lawrence W. O'Neal, St. Louis
St. Louis City F. Eugene Pennington, St. Louis
St. Louis City Hubert A. Ritter, St. Louis

St. Louis City John S. Sciortino, St. Louis
 St. Louis City Charles S. Sherwin, St. Louis
 St. Louis City William L. Smiley, St. Louis
 St. Louis City William Stoneman, III, St. Louis
 St. Louis City Joseph B. Vacca, St. Louis
 St. Louis City John A. Virant, St. Louis
 St. Louis City Leo L. Wacker, St. Louis
 St. Louis City Herbert C. Wiegand, St. Louis
 St. Louis City Carol F. Williams, St. Louis
 St. Louis City Edward H. Wirthlin, St. Louis
 St. Louis City Edwin Wolfgram, St. Louis
 St. Louis City Richard W. Yore, St. Louis

Fourth District

Franklin-Gasconade-
 Warren Louis Jorel, Hermann
 Franklin-Gasconade-
 Warren James G. Shea, Gerald
 St. Charles-Lincoln Louis P. Hetlage, Troy
 St. Charles-Lincoln Paul Rother, St. Charles
 St. Louis County C. Read Boles, St. Louis
 St. Louis County Richard Oglesby, St. Louis
 St. Louis County Jack R. Eidelman, St. Louis
 St. Louis County Falls B. Hershey, St. Louis
 St. Louis County Allen Klippel, St. Louis
 St. Louis County John M. Laird, St. Louis
 St. Louis County Paul W. Miles, St. Louis
 St. Louis County Charles Miller, St. Louis
 St. Louis County Richard Oglesby, St. Louis
 St. Louis County Frederick Peterson, St. Louis
 St. Louis County Melvin Schwartz, St. Louis
 St. Louis County James Sisk, St. Louis
 St. Louis County Richard Sutter, St. Louis
 St. Louis County Miles Whitener, St. Louis
 St. Louis County Paul Whitener, St. Louis

Fifth District

Audrain Ben N. Jolly, Mexico
 Boone John Logue, Columbia
 Boone B. A. Moranville, Columbia
 Boone William See, Columbia
 Boone Hugh P. Stephenson, Columbia
 Boone John Walters, Columbia
 Boone George Wilson, Columbia
 Callaway George Groce, Fulton
 Cole Robert E. Bregant, Jefferson City
 Cole Robert H. Tanner, Jefferson City
 Cole Byron E. Watts, Jefferson City
 Cooper Byron M. Stuart, Boonville
 Montgomery S. J. Byland, Wellsville
 Morgan C. Robert Hall, Versailles

Sixth District

Clinton Richard H. King, Clinton
 Johnson Charles M. Lederer, Warrensburg
 Lafayette-Ray K. Herbert Huber, Richmond
 Lafayette-Ray Jordan Kelling, Waverly
 Pettis A. J. Campbell, Sedalia
 Saline James A. Reid, Marshall
 West Central Alfred Eklund, Pleasant Hill
 West Central Arthur Hansen, Butler
 West Central Robert L. Magee, Eldorado Springs
 West Central James J. Pascoe, Nevada

Seventh District

Jackson Raymond B. Anderson, Kansas City
 Jackson John L. Barnard, Jr., Kansas City

Jackson Hector W. Benoit, Jr., Kansas City
 Jackson Martin L. Crow, Kansas City
 Jackson Calvin E. Engelmann, Kansas City
 Jackson Fred D. Fowler, Kansas City
 Jackson William W. Gist, Kansas City
 Jackson Kenneth C. Hollweg, Kansas City
 Jackson Harry S. Jones, Kansas City
 Jackson William A. Leo, Kansas City
 Jackson George J. Lytton, Kansas City
 Jackson Andrew McCause, Kansas City
 Jackson Wallace P. McKee, Kansas City
 Jackson John H. Mayer, Jr., Kansas City
 Jackson Carl M. Peterson, Kansas City
 Jackson Sidney Rubin, Kansas City
 Jackson Gordon C. Sauer, Kansas City
 Jackson Robert A. Slickman, Kansas City
 Jackson O. Dale Smith, Mission, Kansas
 Jackson Donald M. Spencer, Kansas City
 Jackson Walter J. Stelmach, Kansas City
 Jackson Raymond W. Stockton, Kansas City
 Jackson C. Y. Thomas, Jr., Kansas City
 Jackson James W. Vaughn, Kansas City
 Jackson Charles B. Wheeler, Kansas City
 Jackson Stoughton F. White, Kansas City
 Jackson Paul R. Young, Kansas City

Eighth District

Dallas-Hickory-Polk-
 Dade Doyle C. McCraw, Bolivar
 Greene M. D. Bonebrake, Springfield
 Greene James T. Brown, Springfield
 Greene Robert Maher, Springfield
 Greene Stanley S. Peterson, Springfield
 Greene Carl Schroff, Springfield
 Greene William M. Walker, Springfield
 Jasper John R. Esther, Joplin
 Jasper Herbert J. Schmidt, Joplin
 Jasper W. Russell Smith, Carthage
 Ozarks G. W. Blankenship, Neosho
 Ozarks Charles S. Christianson, Mount Vernon
 Ozarks Kenneth Glover, Mount Vernon
 Ozarks William Hamilton, Aurora
 Ozarks Mary Merideth, Cassville
 Ozarks Stanley Roper, Ozark
 Webster T. M. Macdonnell, Marshfield

Ninth District

Mid-Missouri B. J. Bass, Salem
 Mid-Missouri Rae W. Froelich, Lebanon
 South Central C. W. Cooper, Thayer
 South Central M. L. Fowler, West Plains
 South Central James Hasek, Mountain Grove
 South Central C. F. Smith, Willow Springs
 South Central Joe Spears, Cabool

Tenth District

Butler-Wayne-Ripley Richard V. Camp, Jr.,
 Poplar Bluff
 Butler-Wayne-Ripley George H. Ladyman,
 Poplar Bluff
 Butler-Wayne-Ripley T. E. Ruff, Poplar Bluff
 Cape Girardeau Edwin Burford, Cape Girardeau
 Cape Girardeau Melvin C. Kasten, Cape Girardeau
 Cape Girardeau Harold B. Rapp, Cape Girardeau
 Dunklin Charles R. Cash, Kennett
 Mineral Area C. W. Chastain, Farmington
 Mineral Area Robert F. Dettmer, Ironton

Mineral Area Richard A. Fraser, Bonne Terre
Mineral Area Kirby L. Turner, Potosi
Pemiscot O. W. Cook, Caruthersville
SEMO Robert L. Frazier, Charleston
SEMO Max A. Heeb, Sikeston

The invocation was given by Association President Joseph L. Fisher.

The Chairman of the Credentials Committee, Dr. Charles R. Gulick, reported that satisfactory credentials had been presented by seven officers, ten councilors and 92 delegates. He informed the House that this number of delegates constitutes a quorum and dispensed with a roll call.

Dr. Robert Mayer, Chairman of the Committee on Arrangements, welcomed the Association members, their wives and guests to the 113th Annual Session and expressed the hope for a successful meeting.

The minutes of the 112th (1970) Annual Session, which were published in the July, 1970 issue of *MISSOURI MEDICINE*, were approved as published.

The Speaker announced appointment of the following reference committees and presented his instructions to the committees:

ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

Francis X. Lieb, St. Louis, Chairman
Herbert Schmidt, Joplin
Harold Rapp, Cape Girardeau
William B. Rost, St. Joseph
James G. Shea, Gerald

ON RESOLUTIONS

F. Eugene Pennington, St. Louis, Chairman
C. W. Cooper, Thayer
Carl M. Peterson, Kansas City
Richard P. Bowles, Liberty
William M. Walker, Springfield

ON REPORTS OF OFFICERS

Frank B. Matteson, Grant City, Chairman
Robert H. Tanner, Jefferson City
Paul Rother, St. Charles
J. Eugene Lewis, St. Louis
William W. Gist, Kansas City

ON MISCELLANEOUS AFFAIRS

G. W. Blankenship, Neosho, Chairman
George H. Ladyman, Poplar Bluff
Paul F. Max, St. Louis
Robert V. Thompson, Moberly
Donald M. Spencer, Kansas City

ON MEDICAL EDUCATION AND PUBLIC WELFARE

R. G. Stockton, Kansas City, Chairman
William L. Smiley, St. Louis
Jack R. Eidelman, St. Louis County
James A. Reid, Marshall
George Wilson, Columbia

ON NECROLOGY

Thomas Fischer, Hannibal, Chairman
C. Robert Hall, Versailles
Max A. Heeb, Sikeston



Speaker of the House E. D. Imcs, Maryville, works behind the scenes in preparation for the first session of the 113th House of Delegates on April 15.

A. J. Campbell, Sedalia
Marvin Fowler, West Plains

The Speaker called on Doctor Fisher to deliver the annual President's Message.

(The President's Message is published on Page 423.)

The Speaker then asked Dr. Gerald L. Miller to present the annual message of the incoming President.

(Doctor Miller's address is published on page 426.)

(Both Presidential messages were referred to the Reference Committee on Reports of Officers.)

The Speaker then invited Mrs. William M. Walker to present the annual report of the President of the Woman's Auxiliary.

(This report is published on page 428.)

(Mrs. Walker's report was referred to the Reference Committee on Reports of Officers.)

The Speaker invited Miss Flora Krueger, President of the Missouri Society of the American Association of Medical Assistants, to address the House. Miss Krueger expressed appreciation for the opportunity to appear before the House of Delegates and presented the following address:

"Approximately 280 medical assistants in Missouri are members of the American Association of Medical Assistants. The primary interest and purpose of our organization is to help the medical assistant to increase her knowledge and become a better assistant for you and your patients.

"The American Medical Association announced in October at our convention in Des Moines that they had awarded us a \$15,000 educational grant for 1971. We have a certification program for members and nonmembers. Candidates for certification undergo a two-day

written test given annually at one of six approved colleges. The American Medical Association and the AAMA cooperate in accrediting these training programs. When our group was organized in 1956, the members were very active in social and civic opportunities. Now we are interested in education and efficiency in the physicians' offices.

"Labor unions are now trying to organize the medical assistants in the larger states, such as California and New York. Our name is registered at Washington, D. C. and is known as the group recognized by the AMA. On the recommendation of our advisors in Des Moines we changed our name to conform in all the states, such as: American Association of Medical Assistants, Missouri Society, Greene County Chapter.

"To be eligible to join, an assistant must be employed by a licensed physician who is a member of a component chapter of the American Medical Association. We have had a number of women employed by osteopaths apply for membership. Of course, they are not eligible until, or if, the osteopaths are accepted by the state and component societies.

"We appreciate the support of many of you who have served and are serving our groups as advisors and others of you who have presented educational programs in the various fields of medicine at our meetings and seminars.

"Our state convention is being held downtown this Saturday and Sunday. When you are downtown to take a closer look at the Arch, be sure to come to Stouffers Riverfront Inn and visit our display."

(This report was referred to the Committee on Reports of Officers.)

REPORT OF THE HEALTH CARE FOUNDATION OF MISSOURI

The Speaker then called on Dr. Hector W. Benoit, Jr., Chairman, to present the Report of the Health Care Foundation of Missouri. Doctor Benoit reported as follows:

"Mr. Speaker, Doctor Fisher, Doctor Miller, Officers, Members of the House of Delegates and Members of the State Medical Association and Friends:

"This is in the nature of an Annual Report to the State Medical Association on the part of the Board of Directors of the Health Care Foundation of Missouri.

"As the result of action taken by the House of Delegates of the Missouri State Medical Association meeting in Annual Session in Kansas City in April, 1970 wherein the Council of the Missouri State Medical Association was directed to implement a mechanism of peer review throughout the State, and as the result of action taken in August, 1970 by the Board of Trustees of the Missouri Association of Osteopathic Physicians and Surgeons after consultation with the Missouri State Medical Association, a charter was drafted, filed and approved by the Secretary of State of Missouri creating a not-for-profit corporation called The Health Care Foundation of Missouri. This charter was granted in August, 1970.

"The purpose of this Foundation is stated in the By-Laws, Chapter I, Section 1, and I quote: 'The business of this corporation will concern itself with the Statewide Peer Review mechanism for health care of the State and the regulation of same, the accumulation and utilization of information gathered from this peer review effort, for the education of the public and of the physicians of the State of Missouri, and negotiation, mediation, and discipline as may be appropriate.'

"The By-Laws call for an organizational structure with two classes of membership: Administrative and Participating. Administrative members are those voting members of the Missouri State Medical Association Council and members of the Board of Trustees of the Missouri Association of Osteopathic Physicians and Surgeons. The Participating members are all other accredited members of the Missouri State Medical Association and the Missouri Association of Osteopathic Physicians and Surgeons.

"The Administrative members elected a Board of Directors to serve as the overall governing and policymaking body of the Foundation. This Board consists of nine members: six M.D.'s and three D.O.'s. The First Board of Directors was elected in October, 1970 as follows:

1. Hector W. Benoit, Jr., M.D., Kansas City, three years (Chairman)
2. Richard A. Michael, D.O., Jefferson City, three years (Vice Chairman)
3. Gerald L. Miller, M.D., Kansas City, three years
4. Eugene W. Egle, D.O., St. Charles, two years
5. Joseph L. Fisher, M.D., St. Joseph, two years
6. Rae W. Froelich, M.D., Lebanon, two years
7. Charles R. Gulick, M.D., St. Louis, one year
8. Claus A. Rohweder, D.O., Kirksville, one year
9. John I. Matthews, M.D., Jefferson City, one year.

"This Board will serve until the end of the calendar year 1971. At this 1971 Annual Session, members will be elected to fill the expiring one-year terms on the Board, with incumbents eligible for reelection, and such election and all subsequent elections will be for three-year terms. At all times, there will be at least two Medical Doctors and one Doctor of Osteopathy on the Board who are Participating members of the Foundation. After 1971, all officers will be elected by the Board for one-year terms.

"The Board of Directors has met three times since its creation. The first meeting was in December, 1970, which was mostly an organizational meeting. Some of the activities indulged in by the Board at that time included the creation of standing committees as called for in the By-Laws, such as the By-Laws Committee, the Budget Committee, Nominating Committee and Personnel Committee. All of these committees have been exceedingly active since they have been created.

"The second meeting of the Board was held in January, 1971, at which time preliminary reports from the Budget Committee and By-Laws Committee were received, discussed and approved. Further direction to the Nominating Committee and the Personnel Committee was given. A preliminary report by the Chairman of the Board was given to the Missouri State Medical Association Council which was meeting in conjoint session at that same time.

"It is the Board's primary responsibility to conduct the general business affairs of the corporation in addition to receiving reports from and advising actions for the peer review mechanism and its committees, which will be discussed later in this report. Appropriate office space, secretarial personnel, telephone, stationery and other business items have been secured. Proper liability, Workmen's Compensation and travel insurance have all been purchased. Legal counsel has been retained. The initial hiring of staff has been started.

"At the top of the peer review mechanism stands the Central Coordinating Committee directly responsible to

the Board. This Central Coordinating Committee will coordinate the activities of the Area Panel Review Committees. The Central Coordinating Committee consists of nine members, six M.D.'s and three D.O.'s, not selected to represent given specialties in medicine, but rather for their known stature and prudence and geographical representation throughout the State. These members will serve for two years and are eligible for reappointment. They are as follows:

1. Rae W. Froelich, M.D., Lebanon (Chairman)
2. Robert E. Bregant, M.D., Jefferson City
3. Joseph C. Peden, Jr., M.D., St. Louis
4. James N. Haddock, M.D., St. Louis
5. Francis M. Maple, M.D., Springfield
6. Leonard A. Wall, M.D., Kansas City

7. Harold E. George, D.O., Mt. Vernon
8. Phillip L. Accardo, D.O., Independence
9. William E. Button, D.O., St. Louis

"The Central Coordinating Committee will observe operations of the Panel Review Committees and receive regular reports from the Panel Review Committees. They will report both individually and collectively to their Chairman at their regularly scheduled meetings and, in turn, the Chairman will report to the Board not only as to activities of the peer review mechanism, but also will offer suggestions and recommendations for change in the operation of the peer review function to the Board of Directors for their consideration. Furthermore, the Central Coordinating Committee will receive reports from each of the Panel Review Committees, which may be

Opening Session of the 113th House of Delegates



Joseph L. Fisher, M.D., St. Joseph, President of the Missouri State Medical Association, addresses the House of Delegates at its first session on Thursday in the Chase Club. Seated at the table are (left to right) MSMA Secretary John L. Matthews, Mrs. Rosc Mahon and Mrs. Bert Thomas of the MSMA staff, Legal Counsel John W. Noble, Speaker E. D. Imes, MSMA Executive Secretary Raymond McIntyre, Vice-Speaker Robert A. Slickman and President-Elect Gerald L. Miller.



Gerald L. Miller, M.D., Kansas City, MSMA President-Elect, then took the podium to present his address. Seated next to him are (left to right) Mr. John W. Noble, MSMA legal counsel, and Speaker of the House E. D. Imes.



Next, Mrs. William M. Walker, Springfield, President of the Woman's Auxiliary to the MSMA, reported to the House of Delegates. She discussed the activities and accomplishments of the 27 county auxiliaries in Missouri.

complemented or supplemented by reports from the Specialty Review Committees when indicated. It is anticipated that the Central Coordinating Committee will meet quarterly or more often, if necessary.

"The State of Missouri has been divided into five Panel Areas for purposes of regional review. Each of these Panel Areas is served by a Panel Review Committee. Each such Committee consists of seven Active Members, five M.D.'s and two D.O.'s. There are seven Alternate Members, again five M.D.'s and two D.O.'s, so as to assure adequate attendance at all meetings of the Committee. Each Committee will meet on the call of the Chairman as sufficient material for their consideration becomes available. It is anticipated that when these Committees are functioning properly, they will meet once a month. Each Committee will have proper staff support to assure that all material referred to the Committee has been adequately screened and documented to permit efficient review.

"There has been appointed by each of the numerous specialty societies across the state one Consultant to each Panel Review Committee from each specialty organization. Each of the five Area Consultants in any one specialty are members of the Statewide Specialty Review Committee in that specialty. They are available to all of the Panels for special consultation and on individual cases when needed. The actions of the Panel Review Committees and those of the Specialty Review Committees, then utilized, are forwarded in regular reports to the Central Coordinating Committee for final action.

"The sources of material for the Health Care Foundation to process are five in number; physicians; patients; third party carriers, both private and governmental; institutions such as extended care facilities; nursing homes and hospitals; and management and labor organizations.

"There is one more committee provided for in the By-Laws of the Foundation known as the Judicial Committee. The M.D. members of the Judicial Committee were elected by the Council at their meeting last night and will be included in Doctor Gunn's report to the House. The MAOPS is holding their annual meeting at the same time, and they will elect their representatives on the Judicial Committee at this current meeting.

"This Committee will consist of nine members, again six of them M.D.'s and three of them D.O.'s. The Nominating Committee has been instructed to select names for presentation to the Administrative members for election who are well recognized in their communities as outstanding practitioners, mature, well-respected individuals and above reproach. In addition, on the Judicial Committee there will be two ex-officio members, one an M.D. and one a D.O., both of whom will be members of the State Board of Registration for the Healing Arts.

"The flow of material through the Health Care Foundation will be as follows: All complaints generated by the existence of the Health Care Foundation will be referred to the central office in Jefferson City, where they will be screened by staff for validity and completeness. If decisions are required by staff relative to the acceptability of the material for peer review, the decision will be made by the Board. Having cleared the material for processing, it will be referred to the appropriate Panel Review Committee for its next meeting. Prior to that time, all of the documentary evidence necessary to make for an efficient review will be made available by staff. The Panel Review Committee may elect to render a decision on the basis of the information available and will

report it to the party involved as well as to the Central Coordinating Committee. If because of the inherent makeup of the Panel Review Committee certain expertise is lacking in the management of a certain problem, the Consultant to that Panel Review Committee in the specialty involved will be contacted. If he in turn feels that the material is something about which he does not wish to render a solo opinion, he then will refer it by mail or telephone conference to the other members of that Specialty Review Committee across the state, wherein a decision will be determined. The report of the Specialty Review Committee will then be forwarded to the involved Panel Review Committee and to the Central Coordinating Committee for their final perusal and action. The Central Coordinating Committee, with the backing of the Board of Directors, will render a report to the aggrieved party and indicate to that party what the decision may be and also willingness to support it if necessary with expert testimony in court. In the event that a physician appears to be in serious difficulty from the point of view of ethics, mode of practice, a sense of fiscal irresponsibility or whatever, he will then be contacted by the appropriate members of the Central Coordinating Committee with the backing of the Board, and the error of his ways will be outlined to him. This will be in the nature of an educational process and warning. If repeated evidence of poor practice, excessive charging or lack of appropriate medical ethics occurs in the same individual, his case will then be presented to the Judicial Committee for action. The presence of the two members of the State Board of Registration for the Healing Arts in an ex-officio capacity gives us access to and liaison with the state agency which controls the licensure of physicians. Recommendations of the Judicial Committee will be forwarded to that body for their consideration and to the appropriate State Association, either medical or osteopathic.

"It should be emphasized that the philosophy of the peer review program, as established by the conjoint efforts of the Missouri State Medical Association and the Missouri Association of Osteopathic Physicians and Surgeons and now being carried on by the Board of Directors of the Health Care Foundation, is primarily one of attempting to control costs of medical and health care, to upgrade the quality of medical and health care, to identify and correct educational needs both of the profession and of the public, including insurance carriers, and, hopefully, to a very minimal extent indulge in punitive action against members of the professions if evidence exists to warrant such action. It is anticipated that there will be a better utilization of hospital and office facilities as the result of this ongoing peer review mechanism. It is anticipated that hospitalization review committees will receive added moral support in carrying out their tasks on a day-by-day basis when such support is needed from an outside agency with the authority possessed by the Health Care Foundation.

"It should be stated for the record that the Health Care Foundation's initial funding came from financial support from the Missouri State Medical Association, the Missouri Association of Osteopathic Physicians and Surgeons, the Kansas City Blue Shield Plan and the Missouri Medical Service in St. Louis. It is hoped that by intelligent management, the corporation itself will generate enough income to cover its additional expenses as the program develops. The strong support of all facets of the population is needed to make this very critical peer review mechanism function in the public

interest. Insurance companies, governmental carriers, physicians, hospitals and, most of all, the patients must be given the message and understand what we are trying to do in this complex field of cost and quality control of health care."

(This report was referred to the Reference Committee on Resolutions.)

REPORTS OF OFFICERS

The Speaker stated that the reports of Officers, Committees and Council were published in the Delegates Handbook and referred the reports to appropriate reference committees. He asked for any supplementary reports from Committee Chairmen.

Supplemental Report—Ad Hoc Committee on Alcoholism and Drug Abuse

Dr. Joseph Kendis, chairman, presented the following resolution:

WHEREAS, Alcoholism is recognized as a disease by the World Health Organization, the American Hospital Association and many other organizations, and it is a treatable disease, and

WHEREAS, Drug abuse is of a proportion today as to need the attention of every physician, and

WHEREAS, These diseases are vitally affecting the lives of many of our patients, therefore be it

Resolved, That more education on alcoholism and drug abuse be made available at all levels and that courses about these illnesses be offered in schools of medicine, nursing and social work, as well as in colleges and high schools, the committee making itself available to assist in setting up courses, and, be it further

Resolved, That a symposium on alcoholism and drug abuse be presented at next year's meeting of the Missouri State Medical Association and the committee set up such a meeting, and, be it further

Resolved, That the insurance companies in the state be urged by the Missouri State Medical Association to offer more coverage in their policies to cover the illnesses of alcoholism and drug abuse, and, be it further

Resolved, That the industries in the state be urged to follow the leadership of some of the larger corporations in setting up alcoholism and drug abuse programs in industry, and, be it further

Resolved, That general hospitals be urged to accept alcoholics as they would anyone with another disease and to accept them under the true diagnosis and not under some subterfuge.

(Referred to the Reference Committee on Miscellaneous Affairs.)

The Speaker then requested any supplementary report of the Council. He referred the various subjects within the Supplementary Report of the Council to appropriate Reference Committees. (This Report is published on Page 489.)

The Reports of the Officers, Committees, Commissions and Council are as follows:

REPORT OF THE SECRETARY

The Missouri State Medical Association had 4,171 members as of December 31, 1970. This was an increase of 21 members over the previous year.

MEMBERSHIP CHANGES DURING THE YEAR

Members, January 1, 1970	4,150
New Members admitted during year	174
Reinstated	5
Total added	179
Members dropped during year	39
Deceased	65
Transferred to other states	44
Resigned	10
Total lost	158
Net gain	21
Members, December 31, 1970	4,171



Chairman Joseph B. Kendis, St. Louis, presents a resolution from the MSMA Ad Hoc Committee on Alcoholism and Drug Abuse. Delegate Hugh P. Stephenson, Columbia, listens attentively.

The Committee on Nominations, which is appointed by the President from the House of Delegates, must submit nominations for the following offices:

—Three Vice-Presidents to fill the expired terms of Rolla B. Wray, Nevada; John R. Dixon, Brookfield; C. Howe Eller, St. Louis County.

—A Speaker of the House of Delegates and a Vice-Speaker of the House of Delegates to fill the expired terms of E. D. Imes, Maryville, Speaker, and Robert A. Slickman, Kansas City, Vice-Speaker.

—Two Delegates and corresponding Alternates to the American Medical Association to fill the vacancies created by the expiration on December 31, 1971, of the terms of Delegate, Hector W. Benoit, Jr., Kansas City; Alternate, Hugh E. Stephenson, Jr., Columbia; Delegate, Arthur W. Neilson, St. Louis; Alternate, Robert W. Kelley, St. Louis.

—The terms (two years) of the Councilors of the even-numbered districts expire this year. These Councilors are Lysle M. Bach, Hannibal, Second District; Robert A. Mayer, Clayton, Fourth District; William D. Bradshaw, Clinton, Sixth District; Howard J. McAlhany, Springfield, Eighth District; Eugene T. Hansbrough, Poplar Bluff, Tenth District. Delegates from these districts shall meet during the meeting, prior to the last day, and elect the Councilor for their district. The election shall be certified to the House of Delegates on a prescribed form which will be furnished.

The entire session will be held in the Chase Hotel, St. Louis. The House of Delegates will hold its first session on Thursday, April 15, at 1:30 PM in the Chase Club. Reference Committees will meet in committee rooms in the hotel. The second session of the House of Delegates will convene at 4 PM on Friday, April 16, in the Chase Club. The final session of the House, a breakfast meeting, will be held in the Chase Club of the hotel at 7:30 AM on Sunday, April 18.

Registration facilities will be open on Thursday, April 15, from 11 AM to 4 PM, on Friday and Saturday from 8 AM to 5 PM and on Sunday from 7:30 AM to 9 AM. Registration will be in the Regency Room of the Chase Hotel.

JOHN I. MATTHEWS, Secretary

REPORT OF THE TREASURER

The report of the Treasurer is covered in the Financial Statement which appeared in the March, 1971, issue of MISSOURI MEDICINE and is included in the Delegates Handbook. Therefore, it is not repeated here.

MAX S. FRANKLIN, Treasurer

REPORT OF THE EXECUTIVE SECRETARY

At the 1970 Missouri State Medical Association Annual Meeting, the House of Delegates changed the Association's Constitution and By-Laws by eliminating the section on committees and adopting a new section of Committees and Commissions. This streamlining action established six standing committees and five commissions. The chairmen of the commissions are authorized to appoint ad hoc committees to assist the commissions in their activities. In addition, special committees may be appointed by the President or the Council as circumstances may demand.

Most of these newly-established committees and commissions have been quite active during the past year. Their major activities will be reported elsewhere in the Delegates Handbook either by separate reports or in the minutes of Council meetings or by both in some instances.

A major activity of the Commission on Public Affairs was the planning and executing of the Annual County Medical Societies Officers Conference. This year's annual session marks the first New Member Orientation Program of the Missouri State Medical Association. The Thursday morning, April 15, program was formulated by the Commission on Public Affairs at the direction of the MSMA Council carrying out a directive of the 1970 House of Delegates. Bob Carroll of the Association staff worked closely with the commission on these projects.

The matter of peer review received much attention and study by committees, Officers and Council of the Association during the past year. A tangible result of this attention and study has been the establishment of the Health Care Foundation of Missouri. Royal Cooper of the Association staff has assisted, and is assisting, in this activity.

The Missouri State Medical Foundation (medical student loan program) continues to receive more requests for loans from Missouri resident medical students than the Foundation can grant. Tom Fox of the Association staff assists with the loan program.

In November, 1970, the voters of the State of Missouri passed a constitutional amendment establishing annual sessions of the Missouri General Assembly. This means that numerous health proposals will be considered by the Missouri General Assembly every year now instead of every other year as in the past. This will necessitate more work and staff time, more work and time of the Association's Legislative Committee, officers and many other Association members.

Since the last Annual Session, district meetings have been held in all Councilor Districts. Dr. Joseph L. Fisher, President of the Association, has been present on all of these occasions.

Numerous requests from various sources for additional physicians are regularly received in the Association's headquarters office. Likewise, a good number of physicians seeking locations contact the office for location information. Royal Cooper of the staff works with these requests.

The present 1971 session of the Missouri General Assembly has before it an unusually large number of bills of special interest to the medical profession. These bills

are all being closely followed by your Association's Committee on Legislative Affairs and the Missouri State Medical Association staff. A number of physicians and other witnesses have been scheduled for hearings on medically-oriented bills and continuous liaison is being maintained with members of the Legislature.

Other activities of the staff have been associated with the many programs and projects carried on under the direction of the Association's Committees and Commissions, Officers and Council.

RAYMOND MCINTYRE, Executive Secretary

(Referred to Reference Committee on Reports of Officers.)

Reports of Standing Committees**REPORT OF THE COMMITTEE ON CONSTITUTION AND BY-LAWS**

The Council of the Missouri State Medical Association has instructed the Committee on Constitution and By-laws to prepare amendments to the present By-laws of the Association to eliminate the citizenship By-laws of for membership in the Association. The proposed By-laws change is to be submitted to the MSMA House of Delegates at the April 15-18, 1971 Annual Session.

The change in membership requirements was made necessary by:

1. An opinion of the Missouri Attorney General that the Missouri Law which requires physicians to be citizens of the United States in order to be licensed is unconstitutional, and
2. By the acceptance of this opinion by the Missouri Board of Registration for the Healing Arts which is now licensing foreign born physicians, both by reciprocity and by examination.

The Council of the Missouri State Medical Association, after careful study and advice from the Association's Legal Counsel, at a meeting on October 3, 1970, suspended the required provision for citizenship from the By-laws until the By-laws could be changed by the House of Delegates.

Taking the above actions into consideration, the Committee on Constitution and By-laws recommends the following changes in the By-laws of the Missouri State Medical Association as revised in 1970:

That Chapter I. Membership. Section 1. Be amended by deleting the words, "a citizen of the United States" in lines 7 and 8.

That Chapter I. Membership. Section 4. Associate Members, be amended by deleting the following sentence: "This shall include physicians who meet medical examiners' qualifications, but have not received their citizenship, these Associate Members to apply for active membership within one year after citizenship is granted."

KENNETH C. HOLLWEG, Chairman

PAUL F. MAX

DONALD M. DOWELL

KENNETH E. KNABB

PAUL R. WHITENER

(Referred to Reference Committee on Constitution and By-Laws.)

REPORT OF COMMITTEE ON PUBLICATION

The 67th volume of MISSOURI MEDICINE was completed with the publication of the December, 1970 issue. During the year, 13 issues were printed and distributed. Eleven of these issues contained scientific papers, special articles, organizational reports, monthly messages from the Presidents of the Association and Auxiliary and news

and other items of interest to members of the medical profession. The July 1 issue contained the official proceedings of the 1970 Annual Session of the MSMA House of Delegates. The July 15 issue was the annual Membership Directory.

There were two special issues of the Journal. The scientific articles in the April issue were contributed by members of the faculty of the University of Missouri School of Medicine and the articles in the December issue were contributed by members of the staff of Ellis Fischel State Cancer Hospital.

During the year, 56 scientific papers and 14 special articles were published. Most of them were written by Missouri authors. The Editors wish to express appreciation to all authors who submitted scientific manuscripts and to all other individuals, institutions and organizations, including the administrations, faculties and publication departments of the University of Missouri, St. Louis University and Washington University Schools of Medicine and Ellis Fischel State Cancer Hospital for their valuable contributions.

During the year, MISSOURI MEDICINE was included among the not-for-profit organization publications to be reviewed by the Internal Revenue Service in regard to possible taxable unrelated income.

Mr. Raymond McIntyre, Executive Secretary; Mr. John Noble, Legal Counsel; and Mr. Richard Lennertson, Auditor, have been conferring with representatives of the IRS on behalf of the Journal. The case is now in the hands of the Appellate Division of the Internal Revenue Service and a hearing is anticipated soon. As of March 1, 1971, a final determination of whether or not MISSOURI MEDICINE advertising revenue is to be considered taxable unrelated income had not been made.

At the year's end, the Journal circulation was 4,800.

The complete financial report for the Journal is included in the financial statement for the Missouri State Medical Association for the year 1970. The report was published in the March, 1971 issue of MISSOURI MEDICINE and is included in the Delegates Handbook.

JOSEPH V. FINNEGAN, Chairman
WILLIAM C. MIXSON
CHARLES S. SHERWIN
BYRON M. STUART
WILFRED E. WOOLDRIDGE

(Referred to the Reference Committee on Reports of Officers.)

REPORT OF THE COMMITTEE ON LEGISLATIVE AFFAIRS

The Legislative Affairs Committee of the Missouri State Medical Association is working closely with the MSMA Council to carry out policies established by the House of Delegates concerning the activities of the Missouri General Assembly.

A great deal of legislation pertaining to medicine and the public health has been introduced in the 76th General Assembly. All of these bills are being observed and action taken where necessary. Information concerning specific bills may be found in recent Council meeting minutes.

Your Committee reminds all Missouri physicians that the passage of Constitutional Amendment No. 1 last November has changed the entire legislative picture in Missouri by providing for annual sessions of the General Assembly.

This means that the Legislature will be in session for approximately five and one-half months in odd numbered years and four and one-half months in even num-

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bered years with unlimited introduction of bills in both sessions.

If our legislative program is to be successful, we need even stronger support by the House of Delegates and by every member of the Association.

In the field of national legislation, our Committee is working with the American Medical Association in the best interest of medicine.

JOHN I. MATTHEWS, Chairman
JOSEPH L. FISHER
GERALD L. MILLER
WALTER T. GUNN
DOYLE C. McCRAW

(Referred to Reference Committee on Miscellaneous Affairs.)

REPORT OF THE COMMITTEE ON PLANNING

The Planning Committee held two meetings during the year—one in July, 1970 and the other on Feb. 28, 1971.

At the July meeting, the committee discussed a number of programs and projects of the Association as well as the new committee and commission structure.

The following recommendations were made to the MSMA Council: that the Medical-Legal Commission seek more information concerning the malpractice situation in Missouri along with possible solutions; that a study be considered concerning hospital emergency services and ways to meet the problems of manning emergency rooms in the smaller hospitals; and that thought be given to the establishment of a statewide speakers bureau to be available to lay organizations.

At the February meeting, the Committee took up three subjects assigned by the MSMA Council, namely:

1. A progressive study of the fiscal needs of the Association along with recommendations for a mechanism that will support these fiscal needs.

2. A study of the Association's responsibility to its members in regard to continuing medical education, including the financing of such endeavors.

3. A study of the effect of annual legislative sessions on the MSMA legislative program and on the staff of the MSMA.

Considerable discussion ensued on the first two points, and several avenues of possible income and along with continuing education programs were outlined for additional study.

On the third point, the Committee recommends that the Association consider enlarging the MSMA office staff in the future to give present staff members more time to do legislative contact work. The Committee recommends that new emphasis be put on the Key Man Contact program whereby each legislator has his own physician friend to talk to him about important medical legislation. The Committee believes a strengthening of this program is most important to a successful legislative program and urges that ways be found to motivate more participation by physicians.

DAVID N. KERR, Chairman
HECTOR W. BENOIT, JR.
CHARLES P. MCGINTY
JAMES COPE
ALBERT CROSS
C. READ BOLES
WILLIAM D. BRADSHAW
J. WILL FLEMING
KENNETH GLOVER
JAMES A. HASEK

(Referred to Reference Committee on Reports of Officers.)

Reports of Commissions and Ad Hoc Committees

REPORT OF THE COMMISSION ON PUBLIC AFFAIRS

(This report includes all reports of ad hoc committees set up under this Commission.)

The Commission on Public Affairs has participated in a number of projects during the year at the direction of the MSMA Council and has established several Ad Hoc Committees to carry on specific programs. Some of these committees had one purpose while others have a field of interest and probably should be continued in the next year.

Richard Bowles, M.D., Liberty, headed an ad hoc committee which made arrangements for the County Society Officers' Conference held January 30 and 31 in Jefferson City. Approximately 60 physicians were in attendance. The program featured a panel presentation by newspaper representatives, a talk by a young intern from the University of Missouri Medical Center in Columbia, a session on legislation at both the state and national level and participation by members of our Association. Our banquet speaker was Richard Wilbur, M.D., Deputy Executive Vice-President of the American Medical Association. The consensus of those attending was that the meetings be continued, seeking ways to boost attendance.

Troy Morgan, M.D., Albany, chaired an ad hoc committee which planned the first new member orientation session scheduled for Thursday morning, April 15 in St. Louis, just prior to the opening of the 1971 Annual Session. The meeting will feature talks concerning the different organizations of professional medicine, a discussion of the new Health Care Foundation and a talk of malpractice problems for the young physician. All new members of the Association have received a special invitation and a program.

Arthur Neilson, M.D., St. Louis, chaired an ad hoc committee working in the field of Environmental Health. The Missouri State Medical Association provided \$350 for a research study and evaluation of the air pollution program in St. Louis. St. Louis Medical Society provided \$700 and St. Louis County Medical Society \$350 for this project. A grant of \$350 was made to the Woman's Auxiliary to the Missouri State Medical Association for the preparation of a number of environmental packets for distribution in the state.

Joseph Kendis, M.D., St. Louis, has been named chairman of an ad hoc committee to work in the field of alcoholism and drug abuse. A committee is being named to work with him.

Donald Spencer, M.D., Kansas City, has been named as chairman of an ad hoc committee which will work in the Medical Aspects of Sports field. Other members of the ad hoc committee include Eugene Hansbrough, M.D., Poplar Bluff; Edwin C. Ernst, Jr., M.D., St. Louis; H. Peter Ekern, M.D., Mexico; and David W. Brown, M.D., Springfield.

Allen Klippel, M.D., St. Louis County, has been named chairman, and John Crowe, M.D., Cape Girardeau, vice-chairman of an ad hoc committee on Emergency Medical Services which will work with state agencies and other interested organizations.

Troy Morgan, M.D., Albany, who was formerly chairman of the Committee on Medicine and Religion, is continuing to work in this field under direction of our Commission.

We have under consideration the establishment of a statewide speakers bureau—a recommendation of the Planning Committee—and will continue to pursue this subject.

H. V. GUHLEMAN, JR., Chairman
HUBERT RITTER
A. W. NEILSON
TROY MORGAN
JOHN T. CROWE
THOMAS J. FISCHER
JOSEPH KENDIS
W. W. TILLMAN, JR.
JOHN L. BARNARD, JR.
RICHARD SUTTER
RICHARD BOWLES
JOHN L. MOTHERSHEAD
C. KEITH WHITTAKER
ALLEN KLIPPEL
JOHN P. FERGUSON, JR.

(Referred to Reference Committee on Miscellaneous Affairs.)

REPORT OF THE COMMISSION ON MEDICAL ECONOMICS, THIRD PARTY MEDICINE AND GOVERNMENTAL RELATIONS

(This report includes all reports of ad hoc committees set up under this Commission.)

Our Commission's functions, as outlined by the House of Delegates at the 1970 Annual Session, are to keep close liaison and work with peer and utilization review mechanisms, insurance intermediaries and governmental agencies.

During the past year, our efforts have been primarily directed to the study of resolutions adopted by the 1970 House of Delegates and referred to our Commission by the Council.

Three ad hoc committees were established to make recommendations on the 1970 resolutions to the 1971 House of Delegates.

Francis M. Maple, M.D., Springfield, chaired the Ad-Hoc Blue Shield Committee to study the recommendations of the Reference Committee on Resolutions. This committee was appointed to consider the relative merits and problems inherent in the two Blue Shield plans, with the intent of improving the benefits to the subscribers and rapport with the physicians.

Doctor Maple's committee had several meetings and conferences. The committee report including an evaluation of the Plans in Missouri, and recommendations to the House of Delegates appear elsewhere in the handbook.

Louis P. Hetlage, M.D., Troy, was appointed Chairman of the Ad Hoc Blue Cross Committee. His committee met with representatives of the Social Security Administration, carriers and fiscal intermediaries to study the resolutions concerning utilization review committees, extended care claim rejections and improper decisions against Part A Medicare patients adopted by the 1970 House of Delegates. The report and recommendations of this committee are included in the handbook.

The Ad Hoc Committee to Study the Negotiation of Professional Fees was chaired by Stanley S. Peterson, M.D., Springfield. This committee was appointed to study the establishment of a mechanism for the negotiation of not only professional fees, but also the rules, regulations and procedures that establish the conditions under which physicians render their services. The Council approved funds for the services of legal counsel to as-

sist this committee. The complete report is in the handbook.

HERBERT C. WIEGAND, Chairman
W. J. FERGUSON
KENNETH K. KEOWN
RAE W. FROELICH
LOUIS P. HETLAGE
FRANCIS M. MAPLE
STANLEY S. PETERSON
VICTOR B. BUHLER
MARK D. EAGLETON
E. E. WADLOW
ROLLA B. WRAY
CHARLES W. CHASTAIN
RICHARD E. LORD
BLAINE Z. HIBBARD
JOHN N. MARTIN

FINAL REPORT OF AD HOC BLUE SHIELD COMMITTEE

The Reference Committee on Resolutions, meeting during the 1970 Annual Session of the Missouri State Medical Association in Kansas City, April 2-5, considered three related resolutions concerning sponsorship of Missouri Medical Service (St. Louis Blue Shield). After prolonged discussion from the floor, with due deliberation and consultation with Legal Counsel, the Resolutions Committee disapproved these three resolutions. It was the opinion of the Committee that approval might well endanger the insurance coverage of large numbers of Missouri subscribers to these plans. The Resolutions Committee strongly recommended to the Council that an Ad Hoc (Blue Shield) Committee be appointed to consider the relative merits and problems inherent in the two Blue Shield Plans, with the intent of improving the benefits to the subscribers and rapport with the physicians.

This recommendation of the Resolutions Committee was adopted by the MSMA House of Delegates.

The Resolutions Committee also recommended that a resolution introduced by the St. Louis Medical Society which resolved that "the practicing physicians of Missouri through MSMA direct its sponsored organization, Missouri Medical Services, Inc., to provide total health



A fringe benefit of the Annual Session is seeing old friends again. AMA Delegate J. Loren Washburn (left) of Versailles greets MSMA Past-President Guy N. Magness of University City. Mrs. Magness (left) and Mrs. Washburn enjoy their conversation.

care insurance" be disapproved but referred to the proposed Ad Hoc Blue Shield Committee for further consideration and study. This recommendation was also adopted by the House.

The study of Blue Shield Plans was referred by the MSMA Council to The Commission on Medical Economics, Third Party Medicine and Governmental Relations. Herbert C. Wiegand, M.D., Chairman, then appointed the following as the Ad Hoc Blue Shield Committee of MSMA: Francis M. Maple, M.D., Springfield, Chairman; W. J. Ferguson, M.D., Sikeston; James Haddock, M.D., St. Louis; Roy W. Pearse, M.D., Nevada; Blaine Z. Hibbard, M.D., Kansas City and E. E. Wadlow, M.D., St. Joseph. The methodology of assaying the merits and problems of both the Blue Shield Plans was as follows:

1. To develop a questionnaire that would cover Professional Relations, Claims, Sales, Electronic Data Processing, Accounting and Administration and Personnel and general questions.
2. Both the Missouri Medical Service and the Blue Shield of Kansas City were asked to request an on-site performance review by the National Association of Blue Shield Plans comparing them with National Standards which have been developed at the National Office. Both Blue Shield Plans promptly requested the on-site performance review by the NABSP. An overview of these two inquiries has been received from the NABSP office.
3. An investigation of the constitution and by-laws of the Blue Shield Plans.

The Ad Hoc Blue Shield Committee met on September 30, 1970, and went over the questionnaire which had been previously submitted to the Blue Shield Plans with James C. Sisk, M.D., President; Mr. John O'Brien, Acting Executive Director of Missouri Medical Service; John H. Mayer, Jr., M.D., Chairman of the Board; and Mr. Tom Collins, President of Kansas City Blue Shield Plan.

The final committee meeting was held on February 12, 1971, at Kansas City, Mo., when an evaluation of the constitution and by-laws and the National Association of Blue Shield Plan's overview of the two Missouri Blue Shield Plans were studied. The *Ad Hoc Blue Shield Committee of MSMA recommends the following:*

- I. To the Missouri Medical Service, St. Louis:
 - A. *Participating membership*—That the Missouri Medical Service of St. Louis *enlarge its participating membership* to include Doctors of Osteopathy and Doctors of Dentistry as participating members and that all participating members be members in good standing of one of the component societies of the American Medical Association, National Medical Association, The American Osteopathic Association or the American Dental Association.
 - B. *Nominations to the Board of Trustees*—That the nominations of participating members to the Board of Trustees be made by the local county medical societies as well as nominating the subscriber members for the Board of Trustees. Then allow *all* the participating physicians of a designated geographical area to vote by mail ballot so that there will be a direct relationship between the nominating and voting by the participating members for the physician (M.D.)

Pre-Sate® (chlorphentermine hydrochloride)

Caution: Federal law prohibits dispensing without prescription.

Indications

Pre-Sate (chlorphentermine hydrochloride) is indicated in exogenous obesity, as a short term (i.e. several weeks) adjunct in a regimen of weight reduction based upon caloric restriction.

Contraindications

Glaucoma, hyperthyroidism, pheochromocytoma, hypersensitivity to sympathomimetic amines, and agitated states. Pre-Sate (chlorphentermine hydrochloride) is also contraindicated in patients with a history of drug abuse or symptomatic cardiovascular disease of the following types: advanced arteriosclerosis, severe coronary artery disease, moderate to severe hypertension, or cardiac conduction abnormalities with danger of arrhythmias. The drug is also contraindicated during or within 14 days following administration of monamine oxidase inhibitors, since hypertensive crises may result.

Warnings

When weight loss is unsatisfactory the recommended dosage should not be increased in an attempt to obtain increased anorexic effect; discontinue the drug. Tolerance to the anorectic effect may develop. Drowsiness or stimulation may occur and may impair ability to engage in potentially hazardous activities such as operating machinery, driving a motor vehicle, or performing tasks requiring precision work or critical judgment. Therefore, such patients should be cautioned accordingly. Caution must be exercised if Pre-Sate (chlorphentermine hydrochloride) is used concomitantly with other central nervous system stimulants. There have been reports of pulmonary hypertension in patients who received related drugs.

Drug Dependence Drugs of this type have a potential for abuse. Patients have been known to increase the intake of drugs of this type to many times the dosages recommended. In long-term controlled studies with the high dosages of Pre-Sate, abrupt cessation did not result in symptoms of withdrawal.

Usage in Pregnancy The safety of Pre-Sate (chlorphentermine hydrochloride) in human pregnancy has not yet been clearly established. The use of anorectic agents by women who are or who may become pregnant, and especially those in the first trimester of pregnancy, requires that the potential benefit be weighed against the possible hazard to mother and child. Use of the drug during lactation is not recommended. Mammalian reproductive and teratogenic studies with high multiples of the human dose have been negative.

Usage in Children Not recommended for use in children under 12 years of age.

Precautions

In patients with diabetes mellitus there may be alteration of insulin requirements due to dietary restrictions and weight loss. Pre-Sate (chlorphentermine hydrochloride) should be used with caution when obesity complicates the management of patients with mild to moderate cardiovascular disease or diabetes mellitus, and only when dietary restriction alone has been unsuccessful in achieving desired weight reduction. In prescribing this drug for obese patients in whom it is undesirable to introduce CNS stimulation or pressor effect, the physician should be alert to the individual who may be overly sensitive to this drug. Psychologic disturbances have been reported in patients who concomitantly receive an anorectic agent and a restrictive dietary regimen.

Adverse Reactions

Central Nervous System: When CNS side effects occur, they are most often manifested as drowsiness or sedation or overstimulation and restlessness. Insomnia, dizziness, headache, euphoria, dysphoria, and tremor may also occur. Psychotic episodes, although rare, have been noted even at recommended doses. **Cardiovascular:** tachycardia, palpitation, elevation of blood pressure. **Gastrointestinal:** nausea and vomiting, diarrhea, unpleasant taste, constipation. **Endocrine:** changes in libido, impotence. **Autonomic:** dryness of mouth, sweating, mydriasis. **Allergic:** urticaria. **Genitourinary:** diuresis and, rarely, difficulty in initiating micturition. **Others:** Paresthesias, sural spasms.

Dosage and Administration

The recommended adult daily dose of Pre-Sate (chlorphentermine hydrochloride) is one tablet (equivalent to 65 mg chlorphentermine base) taken after the first meal of the day. Use in children under 12 not recommended.

Overdosage

Manifestations: Restlessness, confusion, assaultiveness, hallucinations, panic states, and hyperpyrexia may be manifestations of acute intoxication with anorectic agents. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension, or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma.

Management: Management of acute intoxication with sympathomimetic amines is largely symptomatic and supportive and often includes sedation with a barbiturate. If hypertension is marked, the use of a nitrate or rapidly acting alpha-receptor blocking agent should be considered. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendations in this regard.

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These young physicians joined the St. Louis Medical Society as junior members on April 13 and were among the first to register for the MSMA Annual Session. Dr. Prasert Luangkesorn (*left*) is a Resident at the St. Louis University Hospitals and Dr. Pravut Sinchai is in general practice in St. Louis. The MSMA held its first annual New Members Orientation Meeting at the Annual Session this year.

trustees. Furthermore, the Board of Trustees then should elect the subscriber members of the Board from the list of nominees submitted. An appropriate number of osteopathic physicians to reflect the percentage of work and involvement of this group on the total Blue Shield operation should serve on the Governing Board of Trustees so as to give access to this important segment of physician care in a portion of the state covered by the Missouri Medical Service.

- C. *Meetings of the Board of Trustees*—A minimum number of meetings (not less than four) should be written into the By-laws for the Board of Trustees with additional meetings to be called by the President or a certain number of the Board of Trustees or by a certain number of participating members.
- D. *Comprehensive Health Care Insurance Coverage*—Similar to the standards set forth below should be offered by the Missouri Medical Service and actively sold so that the practicing physician can render the best service in the most appropriate location.
- E. *Encourage Blue Shield—Participating physician exchange of views* by developing yearly seminars similar to the successful program of the Kansas City Blue Shield.

II. *Recommendations to the Blue Shield of Kansas City:*

- A. *Non-medical or subscriber members of the Board of Directors* should be nominated by their respective county medical societies with representation to occur on an equitable basis throughout the 32 county operating area.
- B. That the *members of the Blue Shield Board of Directors* be limited to *two* consecutive terms and then be eligible for re-election after being off the board for at least a year.
- C. That the *Kansas City Blue Shield increase the number of Osteopathic physicians* on the Board of Directors to reflect the percentage of work

and involvement of this group on the total Blue Shield operation.

III. *Recommendations for both Missouri Service and the Kansas City Blue Shield:*

- A. Increase the effectiveness of both Missouri Blue Shield Plans by developing uniformity in the area of scope of benefits and paid-in-full aspects of such a program.
- B. Develop the same basic goals for both plans with a liaison meeting between representatives of both Blue Shield Plans.
- C. Urge *effective* professional relations program to support the efficiency of full payment coverage.
- D. Initiate a study with cooperation of both Boards to study the feasibility of *amalgamating* into one plan.
- E. Strongly recommend to both Blue Shield Plans the adoption of the American Medical Association's *Current Procedural Terminology (2nd edition)* as the official coding and nomenclature of physicians services with distribution of the "CPT" to the physician members.
- F. That *coordination of benefits* be written into all contracts.

IV. *Recommendation to the Missouri State Medical Association:*

- A. Recommend to MSMA a continuing Blue Shield Committee to assist the implementation of the above recommendations.

V. *That each Blue Shield Plan actively offer a comprehensive health care program which will or does include the following:*

- A. *The scope of benefits* will be covered for both illness and injury *wherever performed* and should include—
 1. Surgery
 2. Anesthesia
 3. Physician services including concurrent, consecutive and consultative care
 4. Obstetrics
 5. Psychiatry be covered with limitation for both in and outpatient coverage
 6. Well baby care up to the first year including appropriate immunizations
 7. No organ transplants except renal
 8. Diagnostic services
 9. Radiation Therapy
 10. Physical Therapy
 11. Inhalation Therapy
 12. Appropriate ambulance service
 13. Appropriate medical appliances and equipment
 14. Blood, contingent on donor replacement of the first four pints or units, depending upon the local blood bank requirements
 15. Acute hospital coverage for semi-private space including Intensive Care and group-nursing-care up to 60 days a year with extended care up to two days for each acute care day not used and professional nursing home care up to three days for each acute care day not used
- B. Group options should include:
 1. Prescription drugs
 2. Inpatient hospital psychiatric care up to 60 days a year
 3. Outpatient psychiatric care up to 24 visits a year

4. Dental care but not orthodontics up to the age of 15
5. Renal dialysis
6. Major medical insurance
- C. Individual options should include:
 1. Coverage outside the United States
 2. Major medical insurance as desired
- D. This program should be a *UCR Service contract* with Peer Review control with up to 80/20 co-insurance being acceptable

The Chairman wishes to thank each of those members who gave unstintingly of their time and effort toward this study. A substantial portion of the above report was passed by the MSMA Council at its regular meeting, January 30, 1971.

Respectfully submitted,
FRANCIS M. MAPLE, M.D., Chairman
W. J. FERGUSON, M.D.
JAMES HADDOCK, M.D.
BLAINE Z. HIBBARD, M.D.
ROY W. PEARSE, M.D.
E. E. WADLOW, M.D.

(Referred to Reference Committee on Resolutions.)

REPORT OF THE COMMISSION ON CONTINUING EDUCATION AND HEALTH MANPOWER

(This report includes all reports of ad hoc committees set up under this Commission.)

Summary of the activities of the Commission on Continuing Education and Health Manpower.

The entire Commission met early in the year for the purposes of planning. At this time, sub-committees were appointed. These are Ad Hoc Committees to do specific things for this year. Edward D. Kinsella, M.D. was appointed chairman of the Ad Hoc Committee for the 113th Annual Session. Paul R. Young, M.D. was appointed chairman of the Ad Hoc Committee on Continuing Medical Education. Charles A. Worley, M.D. was appointed chairman of the Ad Hoc Committee on Health Manpower. All three Ad Hoc Committees have been quite active. Their reports are appended.

J. F. McDONNELL, Chairman
A. SHERWOOD BAKER
EDWARD D. KINSELLA
PAUL O. HAGEMANN
CHARLES A. WORLEY
EDWIN M. POWELL
H. PETER EKER
B. J. BASS
GEORGE H. LADYMAN
PAUL R. YOUNG
RICHARD A. FRASER
RICHARD W. YORE
W. THOMAS MORGAN, JR.
PAUL H. ROTHER
W. WAYNE BOYDSTON

REPORT OF THE AD HOC COMMITTEE 113TH ANNUAL SESSION

The primary function of this Committee is to plan, develop and present the scientific program at the MSMA Annual Session. The Committee feels that this year's

program, which includes a large number of panel discussions and symposia, will attract broad interest of the Association membership.

The cooperation from statewide specialty groups, our three Missouri medical schools, specific Commissions and Committees of the Association and other organizations in developing and presenting particular parts of the two-day scientific program merits the appreciation of all MSMA members. The official program will specifically note these groups to whom we are so indebted.

A number of special-group breakfast, luncheon and dinner sessions will be held in addition to a general luncheon on Saturday, April 17 during the meeting.

The Committee, working with the Association's office staff, is trying this year to measurably improve our efforts in promoting greater attendance at all sessions of the 1971 Annual Meeting Scientific Program. Some 90-minute periods have been reduced to 45, providing time for additional sections and topics. Concurrent sessions numbering three in the past have been reduced to two.

The Committee recognizes the great importance of MSMA leadership in the organization of an annual program which will concentrate on ascertaining needs of Association members in the field of continuing medical education and the meeting of these needs.

EDWARD D. KINSELLA, Chairman
W. WAYNE BOYDSTON
PAUL R. YOUNG
GEORGE R. LADYMAN
B. J. BASS
W. THOMAS MORGAN, JR.

REPORT OF THE AD HOC COMMITTEE ON CONTINUING MEDICAL EDUCATION

The Ad Hoc Committee on Continuing Medical Education met to discuss several items referred to the Committee by the MSMA Council. Also attending the meeting were representatives from the University of Missouri-Columbia; State Board of Registration for the Healing Arts; Missouri Association of Osteopathic Physicians and Surgeons; Missouri Hospital Association; Missouri Academy of Family Practice, Kansas City; and Missouri Academy of General Practice, Springfield.



(Left to right) Immediate Past-President Doyle C. McCraw of Bolivar, Delegate Kenneth H. Glover of Mt. Vernon and Past-President Byron M. Stuart of Boonville look over the convention program as they wait for their name tags at the Registration Desk.

CONTINUING MEDICAL EDUCATION

1. A plan was submitted to the Council for its consideration. The plan was a bi-phasic one in which the first phase was to develop workshops throughout the state in order to assist community hospital staffs in organizing for effective continuing education.

The second phase was to tie in to the Peer Review system so that the peer review mechanism would be used to identify educational needs and the MSMA could identify resources to satisfy those educational needs.

2. It was the recommendation of the Committee that continuing education remain voluntary at present, but MSMA should begin to prepare for compulsory requirements for membership. Further, MSMA should also study the development of statutory legislation requiring continuing medical education for maintenance of licensure.

INTERIM SCIENTIFIC SESSION

The Committee recommends no interim scientific session be considered at this time. Further, it recommends that the present spring session be reevaluated for its educational value and perhaps discontinued with the expenditure of resources directed toward a more effective Continuing Medical Education program.

MEDICAL EDUCATION COMMUNITY ORIENTATION

This program, initiated by SAMA (Student American Medical Association) has been approved by the Council and is to begin this year. The Committee accepts responsibility for surveillance of this program. It appears to be potentially a valid endeavor, but does require active participation by Missouri State Medical Association. It should be noted that this is a cooperative venture involving MSMA, Missouri Association of Osteopathic Physicians and Surgeons and Missouri Hospital Association, and is endorsed by Missouri Academy of General Practice.

EMERGENCY ROOM STAFFING

This Committee was asked, for the sake of expediency, to consider the problem of emergency room staffing in small community hospitals. The Committee concluded that it could not offer a simple single solution to the various community hospital staffs. The recommendation was to refer these hospital staffs to prepared texts and handbooks on the subject. Further, a demonstration of a system exists in Lebanon, Mo.

PAUL R. YOUNG, Chairman
A. SHERWOOD BAKER
RALPH R. HALL
ROBERT S. MOSSER
GEORGE H. LADYMAN
W. WAYNE BOYDSTON
ARNOLD BLOCK
E. JAMES POTCHEN

REPORT OF THE AD HOC COMMITTEE
ON HEALTH MANPOWER

The Ad Hoc Committee on Health Manpower at a meeting October 18, 1970 recommended to the MSMA Council and received approval from them for the endorsement of the Health Career Recruiting Program developed by the Missouri Hospital Association. This recruiting program, which includes all health careers, is

funded through the Missouri Regional Medical Program with invitations to all interested organizations for financial contributions. The Missouri Hospital Association is directing the program toward recruitment of students for all medical, paramedical and health careers ranging from the 7th through the 12th grade in the public school systems.

The Committee recommends that (1) all physicians publicize and support the program at the respective local county medical society level and (2) that all physicians participate when invited to serve as a speaker when a program is scheduled at their local schools or hospitals or related career day programs. The Committee also recommends that preceptors urge medical students, while in their preceptorship program, to serve as speakers for local groups, especially when the program is on medical careers. It is also suggested that the Student American Medical Association members be invited to serve as speakers when career recruiting programs are scheduled at the local level.

Following study of the resolution referred to the Committee by the House of Delegates regarding Diploma Nursing Education, the Committee recommends that the Missouri State Medical Association take all appropriate steps to encourage recruitment, development and expansion of diploma nursing programs. The Committee recommended and received Council approval for (1) the need for nursing personnel at all levels is acute; (2) the need is not being met; (3) strong and effective action is necessary; and (4) the medical societies should support all accredited nurse training programs at every level. The Committee invites any MSMA member to offer suggestions for solution to the problem of the nursing shortage.

CHARLES A. WORLEY, Chairman
B. J. BASS
A. J. SIGNORELLI
JOHN H. WALTERS
RICHARDSON K. NOBACK

(Referred to Reference Committee on Medical Education and Public Welfare.)

REPORT OF COMMISSION ON
MEDICAL-LEGAL AFFAIRS

Our Commission was established by the 1970 House of Delegates to investigate and study Medical-Legal matters affecting the practice of medicine.

During 1969, the former Medical-Legal Committee explored the possibility of the Association sponsoring group professional liability insurance for its members. It was recommended to the House of Delegates that this subject be given further study.

The AMA announced early in the year that efforts were being made to establish a national professional liability insurance program. Many difficulties were encountered during the negotiations and at the AMA Clinical Session in December, the House of Delegates approved the recommendation of the Reference Committee that AMA should not attempt to establish a National Insurance Program.

The Council referred a suggestion from the Planning Committee that our Commission seek more information concerning the malpractice situation in Missouri along with possible solutions to the problem.

After a comprehensive questionnaire had been developed, the Council approved funds to survey the

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members and evaluate the replies. Hopefully, we will have this in the mail in the near future.

In early March, a liaison meeting with members of the Missouri Bar Association and the Missouri Association of Osteopathic Physicians and Surgeons will be held. Our problems will be discussed and an agenda will be prepared for a joint meeting of the Medical-Legal members of the three Associations.

DANIEL L. YANCEY, Chairman
ROBERT E. FUNSCH
FREDERICK J. MCCOY
NED B. CHASE, JR.
JACK S. SANDERS
LEE T. FORD, JR.
JACK L. VINYARD
WILBUR P. McDONALD
HAROLD B. RAPP
WILLIAM R. MCPHEE
JOSEPH S. COPE
JEROME I. SIMON
IRVING H. CLARK
MILES C. WHITENER
E. J. SCHEWE, JR.

(Referred to the Reference Committee on Constitution & By-Laws.)

REPORT OF THE COMMISSION ON INTER SPECIALTY MEDICINE

The Commission on Interspecialty Medicine met on July 26, 1970 in St. Louis. In December, 1969, the MSMA Council charged the Interspecialty Committee with the responsibility of performing a study in depth of the Physician Assistant Programs and to report back to the Council with a firm recommendation for further action.

A subcommittee was appointed to undertake this study, namely, Drs. George Hawkins, William Stoneman and Charles Gulick. After reviewing the work of the Ad Hoc Committee chaired by Dr. Joseph Edwards, which had reported to the Council in July, 1969, the subcommittee then divided its work into three parts. Dr. George Hawkins studied the results of questionnaires which were sent to institutions now offering medical assistant programs. Dr. Hawkins also attended the AMA meeting in Chicago on Health Manpower Problems. Dr. Stoneman developed a questionnaire which was mailed to all members of the MSMA after receiving Council and House of Delegates approval at the 1970 spring meeting in Kansas City. Dr. Gulick reported that his portion regarding medical manpower problems could be summarized by the following:

1. Medical schools in the State of Missouri evidently cannot keep up with the need for physicians to practice medicine in outstate Missouri.
2. Missouri needs are concentrated in the rural areas since the physician to population ratio in the urban areas is excellent, but the rural areas are relatively deprived of medical services.
3. Without Osteopaths, outstate Missouri would have a much greater problem than it has at the present time.
4. If a Medical Assistant Program is to be of great value to the citizens of this state, the Medical Assistant must be utilized to a considerable extent in

the areas where medical care is not readily available.

Dr. George Hawkins, Jr., reported on problems relating to specific standards and guidelines for each individual specialty. After review of experiences in other states, he urged consideration and possible implementation by way of the respective local county medical societies. He stated also that the liability insurance cost would be increased 50% to cover the physician assistant.

Dr. William Stoneman, III, reported on the results of the MSMA survey. Total response to the survey was excellent. More than 50% of responses were favorable toward establishment of a physician assistant category in Missouri. Responses indicated a much larger "market" for physician assistants than could be satisfied by anything less than a crash program of training for a period of several years.

The survey indicated substantial differences in needs among the various specialties and suggested that while significant interest existed in rural areas, the bulk of the demand appeared to be in metropolitan areas with greater interest found in the more highly organized types of practice than in smaller ones.

The tabular material represents initial analysis of the first 1,225 questionnaires returned from the members of the Missouri State Medical Association in response to the MSMA survey on physician attitudes toward the use of physician assistants in Missouri. This questionnaire was developed and carried out by the Bi-State Regional Medical Program at the request of the Council of MSMA.

The data presented include only those questionnaires returned prior to the cut-off date for development of this report to the Interspecialty Commission. Approximately 60 additional questionnaires have since been received.

While the data presented are not validated fully, they can be assumed to give a reasonable profile of the attitudes of members of the Missouri State Medical Association on the questions asked. It is important to remember that the data outlined are a reflection of MSMA members' attitudes toward the questions asked and do not necessarily represent objective data except in that sense. This questionnaire was designed more to survey the "market" among practicing physicians in this state for utilization of physician assistants than a plebiscite as to whether such a new health-care profession should be encouraged by MSMA.

Dr. Gulick reported the following motion was made, seconded and approved by the Commission:

"Move approval of the Commission survey and report and recommend the Council move toward implementing a Physician Assistant Program and that they specifically emphasize the concept of direct supervision by the physician in contra distinction to the P.A. practicing independently; that the various disciplines of practice define and outline the needs and training requirements for the assistant for each discipline; that legislation be recommended to legally make the assistant responsible to the physician and under control of the State Board of Healing Arts."

It was pointed out that if each specialty would outline the needs and requirements of a physician assistant

in their particular field, we would have some 20 different educational requirements. After further discussion by the MSMA Council in session on October 3-4, it was moved, seconded and carried that the motion of the Commission be disapproved.

For the information of the Commission, Dr. Gerald Miller, MSMA President-Elect, described in some detail the proposed Missouri State Medical Association Peer Review Program.

Dr. Gulick reported that Dr. George Wakerlin, representing the Missouri Regional Medical Program, described a proposed renal disease control program. The program would include all states of the disease, beginning with prevention and ending with rehabilitation, and will include all sources of funds and contributions of talents from all institutions, volunteer agencies and local, state and federal governments. The Commission approved in principle, "Preliminary Planning for a Regional, State or Multi-Regional Renal Disease Program," subject to official confirmation by the MSMA Council. On motion, duly seconded, the Council approved the "Preliminary Planning for a Regional, State or Multi-Regional Renal Disease Program." Motion carried.

Dr. Gulick appointed representatives from specialties including the Missouri Surgical Society, Missouri Radiological Society, Missouri Pathology Society, Missouri Society of Thoracic and Cardiovascular Surgeons and the Missouri OB-GYN Society to attend a Cancer Planning Conference on October 8, 1970 in Columbia.

The Chairman included in his report to the Council, in session on October 3-4, that the Association had received an inquiry from the Children's Hospital Research Foundation, Inc., Columbus, Ohio, seeking endorsement of a project on "Evaluation of Nutritional Status of Preschool Children in the U. S." Preschool children in 74 communities in 40 states will be included in the study and Adair County, Mo. is one. The MSMA Council endorsed the study, subject to the future approval of the President of the North Central Counties Medical Society and that a report of the findings of the study be sent to MSMA along with a report of the previous study. Results of the survey were reported by the Children's Hospital Research Foundation, Inc. and are on file in the MSMA Headquarters office.

The MSMA Council, in session on October 3-4, directed the Subcommittee to study further related information and needs regarding the proposal to establish a new category of health service, namely, Physician Assistant.

The Subcommittee to Study the Physician Assistant Program met on November 4, 1970 and reviewed related material developed to date, including the statistics of the statewide MSMA survey covering all medical specialties.

The Subcommittee proposes for Council approval, subject to approval by the full Commission on Interspecialty Medicine which will meet on January 17, 1971, the following:

- I. Considering information from respondents to the MSMA statewide survey, medical specialties selected by the subcommittee for further study are (1) General Practice, (2) Internal Medicine, (3) General Surgery (including emergency room) and (4) Pediatrics.
- II. Representatives from the four specialties identified in I, plus respective presidents and officers (using

the roster of the Commission on Interspecialty Medicine) be invited to meet with the Subcommittee and establish classifications of curriculum or a general curriculum to be offered by the medical schools for training of Physician Assistants, as shown above.

The full Commission on Interspecialty Medicine met again on January 17, 1971 to continue the Study of the Physician Assistant Training Program and also to consider updating of the medical fee schedules.

The Chairman asked Dr. Hector W. Benoit, Jr., who serves also as Board Chairman of the new Health Care Foundation of Missouri, for a progress report to date. Doctor Benoit reported that office space was obtained near the MSMA Headquarters office and that executive staff service would be provided temporarily and on a part-time basis by Mr. Royal O. Cooper. Financial appropriations from interested agencies were received amounting to \$47,000 which was estimated at about half of the necessary budget for the coming year.

It was agreed that medical specialties represented by more than one specialty organization will confer and appoint a single representative to serve on the Interspecialty Commission. This is imperative and should be implemented immediately. If not solved by the time of MSMA Annual Session on April 15-18, 1971, the Commission on Interspecialty Medicine will recommend such appointees for approval by the President. In particular, reference was made to (a) two organizations representing the specialty of general surgery and (b) the two organizations representing the specialty of psychiatry.

After a thorough discussion, the Commission decided not to update the 1967 cut-off fee schedules which were prepared and submitted to the Missouri Division of Welfare for administration of the Medicaid Program. It was agreed not to release the fee schedule to anyone at this time. Reference was made to one of the specialties on the Commission which studied, on its own volition, the comparison between 1967 cut-off schedules and projected comparative figures for 1970 and reported only slight increases in some procedures. In lieu thereof, the Commission recommends to the Council that no further fee schedule studies be done at this time and suggests that the new Health Care Foundation of Missouri might consider utilizing in the future the existing 1967 cut-off fee schedules updating them by utilizing cost of services indices or other appropriate methods.

Doctor Gulick announced that, with Commission membership approval, he will ask Dr. William Stoneman to serve as Chairman of the Subcommittee to Continue Study of the Physician Assistant Program. Doctor Stoneman reported on progress and developments to date at the national, state and various local levels. Considering action taken by institutions and related health career groups in the development of physician assistant programs especially in metropolitan areas, the Commission, after thorough discussion, suggest the following for Council approval:

1. MSMA endorsement and support of physician assistant training programs in principle.
2. MSMA Council approve release and/or publication in MISSOURI MEDICINE of the MSMA Physician Study, conducted by the Subcommittee comprised of Drs. Gulick, Hawkins and Stoneman, to learn attitudes of physicians across Missouri regarding

the new Physician Assistant Program. Before release, the results of the study will be edited by the Subcommittee for publication.

3. Suggest MSMA Council ask the MSMA Committee on Legislative Affairs, the MSMA Commission on Medical-Legal Affairs to work jointly with the Subcommittee of the Interspecialty Commission Physician Assistant Program to (a) determine legal status establishing certification or licensure of physician assistants, possibly using the umbrella concept similar to physical therapists, and (b) to seek opinion of the Missouri Attorney General in defining what constitutes the practice of medicine.
4. Study of the proposed curriculum for implementation in medical schools would be studied and developed at a later date.

Doctor Stoneman invited any members of the Commission interested in serving on the Subcommittee to Study the Physician Assistant Program to submit their names to him.

As a point of further information, Doctor Gulick stated that all projects referred to this Commission to date originated with the MSMA Council, but that this Commission is free to refer back any suggestions of importance to the Council.

CHARLES R. GULICK, Chairman
TRUMAN B. SCHERTZ
WALTER J. STELMACH
CYRIL COSTELLO
G. W. N. EGGERS, JR.
ROBERT M. HAZEN
M. RICHARD CARLIN
LESTER E. WOLCOTT
EDMUND V. COWDRY, JR.
FRANCIS X. LIEB
ARTHUR PORPORIS
M. D. MARCUS
GEORGE L. HAWKINS, JR.
OMER HAGEBUSCH
WILLIAM STONEMAN, III
FRANCIS M. MAPLE
HECTOR W. BENOIT, JR.
JAMES T. LESLIE
JOSEPH C. PEDEN, JR.
HERBERT E. ROSENBAUM
EDWIN WOLFGRAH
JAMES W. WILLOUGHBY

(Referred to Reference Committee on Resolutions.)

THE COUNCIL

The Speaker stated that the reports of Council Meetings are referred to the Reference Committee on Reports of Officers except those specific portions which are referred to other Reference Committees. These portions are preceded by a black square (■) and are concluded with the committee assignment, which is in bold face type.

Meeting of April 5, 1970

The MSMA Council met at the Muehlebach Hotel in Kansas City on April 5 immediately following the closing of the 112th Annual Session with President Joseph L. Fisher, M.D., St. Joseph, presiding. Those present were Drs. Fisher; Doyle C. McCraw, Bolivar; Gerald L. Miller, Kansas City; Max S. Franklin, St. Louis; John I.

Matthews, Jefferson City; John N. Martin, St. Joseph; Walter T. Gunn, St. Louis; Robert A. Mayer, Clayton; James C. Cope, Columbia; William D. Bradshaw, Clinton; E. A. Stricker, St. James; Howard J. McAlhany, Springfield; J. Loren Washburn, Versailles; William D. Mayer and William C. Allen, Columbia; R. Allen Chandler, Kansas City; John A. Griffith, Jr., Kansas City; Messrs. John W. Noble, Kennett; Allen D. Smith, Kansas City; Gary L. Schnedler, Springfield; Ray McIntyre, Bob Carroll and Royal O. Cooper, Staff, and R. W. Kelley, M.D., St. Louis.

Dr. Fisher opened the meeting by asking Dr. Miller to introduce the new Councilor from the Seventh District. Dr. Miller introduced Dr. R. Allen Chandler of Kansas City and welcomed him to the Council. Dr. Miller also thanked the Council and Officers for their support during his year as Chairman of the Council.

Dr. Walter T. Gunn was nominated and elected Chairman of the Council by unanimous vote and, thereby, became the presiding officer.

ELECTION OF OFFICERS

Dr. E. A. Stricker was nominated and unanimously elected Vice-Chairman of the Council. Dr. John I. Matthews was nominated and unanimously elected Secretary and Dr. Max S. Franklin was nominated and elected Treasurer by acclamation. Congratulations also were extended to the Councilors from the odd-numbered districts who were reelected.

PEER REVIEW

■ The Chairman indicated that the House of Delegates had referred the matter of peer review back to the Council for implementation. It was suggested that the implementation of a peer review mechanism be referred back to the Ad Hoc Committee on Peer Review—Drs. Rae Froelich, Joseph Peden, Jr. and Al Biggs—for a report back to the Council at its May meeting regarding the development of a well-implemented program, with one addition to the Ad Hoc Committee—Dr. Clement Grebel of St. Louis.

It was moved and seconded that the Ad Hoc Committee on Peer Review be reappointed with the addition of Dr. Grebel and that the Committee report to the Council at its May meeting. Motion carried.

TEACHING HOSPITALS PARTICIPATION IN TITLE XIX PROGRAM

Dr. William Mayer brought the Council up-to-date regarding his communication with Mr. Carter, Division of Welfare, concerning teaching hospitals participation in the Missouri Title XIX Program and payment of supervisory physicians in such hospitals. He indicated that Mr. Carter had met with representatives of the medical and osteopathic schools in Missouri regarding this problem and they all felt it has been solved. However, it was later indicated that this might not be true. Dr. Mayer stated that Mr. Carter is now awaiting word from Washington and is to inform him what the final decision will be.

Dr. William Mayer then thanked the Council on behalf of Drs. Felix, Danforth and himself for the checks for the three medical schools from AMA-ERF.

Dr. Peterson indicated that four or five members of the MSMA serve on a medical advisory committee to

the Division of Welfare and felt that if such problems as reported by Dr. Mayer were known by these physicians, they might be able to help resolve them.—Referred to Resolutions Committee.]

COMPREHENSIVE HEALTH PLANNING

■ Dr. Kelley, a member of the Governor's Council for Comprehensive Health Planning and Chairman of the MSMA Committee, reported to the Council on Comprehensive Health Planning in Missouri. He indicated that several areawide planning agencies have been organized and are now functioning, while several others are still in the early planning stages.

Dr. Kelley stated that on the basis of his experience with the State Agency and the Metropolitan St. Louis area, he had the following recommendations to make to the Council:

(1) Continue the cooperation of MSMA with the state and areawide planning agencies, urging the membership of MSMA to take an active part in planning from the initial and exploratory stage and continuing into the operational phases.

(2) Urge the county societies within the geographical limits of the areawide agencies to band together and act as a unit in dealing with the agencies, choosing those members who will be most valuable to act on governing boards or advisory councils. It is extremely important that physicians select their representatives and not permit the choice to be made by lay organizers.

(3) The State Association should keep a close watch on developing areawide agencies, offering its good services and personnel wherever possible. Mr. Bob Carroll of the MSMA staff has attended meetings of the State Advisory Council. It would be highly desirable if Mr. Carroll or some other member of the staff could monitor meetings of the areawide agencies. The staff of the State Council (headed by Mr. Kenneth Bopp) will be happy to keep our state office informed of all scheduled meetings and will place our office on the mailing list for all informational material.

(4) The State Agency has several task forces, either in operation or development, which will be concerned with such matters as distribution of health manpower, financing of health care, environmental control, etc. In many instances, these task forces are dominated by lay persons (consumers) and the health providers are often public health oriented or full-time medical school personnel. These problems and the approach to their solution will parallel, and often duplicate, studies that this Association might wish to initiate. It, therefore, seems wise that organized medicine should offer to cooperate in all these studies assuring that practicing physicians will be adequately represented. An example is the State Council's Task Force for Accessibility to Health Services which is headed by Dr. James D. Dexter of the Department of Neurology at Missouri University School of Medicine. This task force has been working hard, meeting once a month for two-day sessions, involving some eight hours of consultation, interviewing, hearings, etc. There was no practicing physician on the task force and the question raised at the State Advisory Council meeting was "where can you find a practicing physician who can give this amount of time." Fortunately, the group at Farmington headed by Drs. George Watkins and Richard Crough agreed to provide one of their members, Dr. Chastain, to join this task force, covering for him when he was away from his

practice and substituting for him on the task force when he could not attend. This is the type of involvement which will be essential if organized medicine is to have a hand in planning for its future.

(5) The Division of Comprehensive Health Planning in the Department of Community Affairs operates on a budget financed 75% by the federal government and 25% by the state. This year the state share is \$47,000. I would suggest that support for inclusion of this amount in the state's budget should be given by the Council of MSMA with letters to proper state administrative and legislative personnel expressing this support.

It was moved and seconded that a letter be sent to the Department of Community Affairs indicating that the Council of the MSMA approve their budgetary request to the Legislature for \$47,000 as the state's share of the budget this year for the Division of Comprehensive Health Planning. Motion carried.

Considerable discussion followed regarding practicing physicians involvement in the setting up and implementation of local CHP agencies. It was felt that physicians should be involved from the beginning of the planning stage and in areawide planning, should act as a unit and not as separate medical societies. It was suggested that each Councilor might organize a medical advisory committee within his district to work with comprehensive health planning agencies.

On motion, duly seconded, the report on Comprehensive Health Planning was approved.

CRIPPLED CHILDREN'S TREATMENT CENTER

Dr. Miller indicated that he had received an informational letter from Dr. John Buessler regarding the request of the Kirksville Osteopathic Hospital to become a service treatment center for crippled children. The Curators of the University of Missouri have placed this on file awaiting some negotiations. The final decision is in the hands of the Curators. HEW has indicated that they will take no action on this as it is a state problem. After discussion, Dr. Miller moved and it was seconded that the Council go on record with a letter to Dr. Vernon Wilson encouraging and suggesting delay in negotiations, pointing out the need for assurance of the establishment of quality control measures for such services and that the Council or a committee from the Council would be happy to discuss this entire matter further. Motion carried.

Dr. Gunn read a letter of resignation from Mr. Tom R. O'Brien as Executive Assistant of the MSMA effective April 1, 1970. It was moved and seconded that a letter be written to Mr. O'Brien accepting his resignation as of April 1, 1970 with regrets and stating our appreciation for his long and many years of service. Motion carried.

It was further moved and seconded that an addendum be made to the Employees' Pension Plan so that a lump sum can be paid out to employees in the plan terminating their employment in lieu of only monthly payments to which they are entitled. Motion carried.

Dr. McCraw and Dr. Miller both expressed their appreciation for the support of the Council, Officers and staff during the past year.—Referred to Medical Education Committee.]

CLINICAL LABORATORY ADVERTISING

■ Mr. McIntyre stated that in the future we may be receiving requests from commercial laboratories to advertise in MISSOURI MEDICINE and asked the Council's

feeling regarding this. After a brief discussion by Counsel, it was moved and seconded that we accept such ads meeting proper standards. Motion carried. Mr. McIntyre further indicated that the Executive Committee on March 8 approved the leasing of exhibit space at MSMA Annual Sessions to commercial laboratories approved by federal agencies.

Dr. Miller brought up the subject of clarification of floor privileges in the House of Delegates for elected officers of the Association. It was pointed out that this was not clearly spelled out in the MSMA Constitution and By-Laws. It was moved and seconded that this problem be referred to the Committee on Constitution and By-Laws for study and clarification.

Dr. McCraw reported on a telegram he had received from the Missouri Nurses' Association. It was moved and seconded that Mr. McIntyre contact the Executive Secretary of the Missouri Nurses Association to discuss the items presented in the telegram. Motion carried.

On motion of Dr. Cope, duly seconded, it was moved that copies of the four or five national health insurance plans be secured and mailed out by staff to all Council members. Motion carried.—*Referred to Constitution and By-Laws Committee.*

NEXT COUNCIL MEETING

The next meeting of the Council will be held on May 23, 24, 1970 at the Downtown Holiday Inn, Jefferson City.

Meeting of May 23-24, 1970

Walter T. Gunn, M.D., St. Louis, Chairman, called the meeting to order. Those present were Drs. Gunn; Joseph L. Fisher, St. Joseph; Gerald L. Miller, Kansas City; John I. Matthews, Jefferson City; Max S. Franklin, St. Louis; Doyle C. McCraw, Bolivar; John N. Martin, St. Joseph; Lysle M. Bach, Hannibal; Robert A. Mayer, St. Louis; James C. Cope, Columbia; Wm. D. Bradshaw, Clinton; R. Allen Chandler, Kansas City; Howard J. McAlhany, Springfield; E. A. Stricker, St. James; E. T. Hansbrough, Poplar Bluff; Arthur W. Neilson, St. Louis; J. Loren Washburn, Versailles; Hector W. Benoit, Jr., Kansas City; William H. Danforth, St. Louis; Richardson K. Noback, Kansas City; Rae W. Froelich, Lebanon; J. F. McDonnell, Kansas City; Richard Kloecker and Mr. Charles Rand Boyle, St. Louis; Messrs. John W. Noble, Kennett; Allen Smith, Kansas City; Hollister Smith, St. Louis; Edgar Mothershead, St. Louis; Gary Schnedler, Springfield; Ray McIntyre, Tom Fox, Bob Carroll and Royal O. Cooper, Staff, Jefferson City.

The Chairman requested approval of the minutes of the two previous Council Meetings held on April 1 and April 5, 1970. On motion, duly seconded, the minutes were approved as printed.

REPORT OF THE TREASURER

Dr. Franklin reported that no formal financial report would be presented since many of the bills from the Annual Session have not been received. He stated that the dues are coming in well and the MSMA is in good financial position to carry on its programs. It was moved by Dr. Bradshaw and duly seconded that the Treasurer's Report be accepted. The motion carried.

REPORT OF THE EXECUTIVE SECRETARY

Mr. McIntyre said that thank you notes had been received from both Mrs. Joseph L. Fisher and Mr. Noble

for the floral arrangements sent to them during their hospitalizations.

He stated that Dr. Vernon Wilson of the University of Missouri has accepted a position with HEW which will be directly under Dr. Egeberg and effective on July 1. It was moved and seconded that a congratulatory letter be sent to Dr. Wilson on his appointment. The motion carried.

Mr. McIntyre said that Senator A. M. Spradling of Cape Girardeau has been invited to be one of the featured speakers at the AMA Session in Chicago at the Conference of Presidents and officers on Sunday, June 21, at 9:00 in the Palmer House.

He also reported that during the Annual Session in Kansas City, Dr. McCraw had received a wire from the Missouri State Nurses Association regarding the AMA's position concerning the use of nurses as assistants to physicians. It was suggested that representatives of the Missouri Nurses Association and the MSMA meet to discuss mutual problems. Mr. McIntyre stated that he had met with the Executive Secretary of the Missouri Nurses Association to discuss this matter. It was agreed that the MoNA would provide a suggested agenda on points of mutual concern for a meeting with them and, possibly, the Hospital Association. A suggested agenda of discussion items has not been received to date.

Mr. McIntyre stated that Dr. Miller had contacted him a short time ago relative to appointment of an Assistant Regional Director for Health and Scientific Affairs in each of the nine HEW regions. Missouri is in Region VI. At the present time, the Regional Director of HEW in each of these regions has the job of coordinating all HEW activities on the regional level. Mr. Max Mills is the Regional Director of Region VI. Assistant Regional Directors of Health and Scientific Affairs to be responsible to the Regional Director are now being appointed. MSMA has been informed that HEW would be happy to receive recommendations for consideration.

■ Mr. McIntyre said that Dr. Fisher had received a letter from Dr. Francis Maple regarding the stand of the Missouri Society of Internal Medicine concerning adoption of AMA's current procedural terminology, second edition, as official medical terminology for the state of Missouri. Dr. Fisher requested Dr. Miller to report on this matter because of his close connection with Blue Shield. Dr. Miller said that the California Relative Value Study set-up has now proposed a five-digit system to replace the four-digit system. The AMA's Current Procedural Terminology has gone to the five-digit system. He stated that the Blue Plans are not in favor of this change. He pointed out that under the new coding, 3,600 procedures could be coded rather than 2,200 under the old system. Code numbers in the new system could range up to 99999 in place of the four-digit designations which provide room for 9,999 items. Dr. Miller further stated that NABSP (National Association of Blue Shield Plans) estimates that changing from a four to five-digit system would cost at least \$14 million and probably up to \$30 million. This cost, of course, would have to be placed on the subscribers.

After considerable discussion regarding the four- and five-digit systems, it was moved by Dr. McAlhany and seconded that the Council disapprove change to the five-digit system. The motion carried.—*Referred to Resolutions Committee.*

ALLIED DOCTORS INCORPORATED

■ The Chairman then called upon Dr. Richard Kloecker, President, and Mr. Charles Rand Boyle, Executive Secretary, Allied Doctors, Inc., to give the Council a brief description of their organization and its goals. They indicated that a group of St. Louis physicians and dentists have banded together to try to improve the public image of doctors. Allied Doctors, Inc. is a nonprofit organization chartered by the Secretary of State. Membership dues in the organization are \$100 per year. At the present time, they have about 30 members. It was indicated that they would use spot broadcast messages on radio, articles in magazines and newspapers and, hopefully, some television. Dr. Kloecker explained that they would like to have the endorsement of the MSMA and would welcome ideas from the Council to help in attaining their goal.

Dr. Kloecker stated that Allied Doctors, Inc. had sent a brochure and letter to the physicians and dentists in the St. Louis area explaining their organization. After further discussion on Sunday and on motion, duly seconded, it was agreed that a letter be sent to Dr. Kloecker commending the group for their efforts and encouraging them to continue their activities, hopefully by working with the MSMA Commission on Public Affairs. It was further agreed that this report be referred to the Commission on Public Affairs.

The Chairman said that Dr. Kloecker had requested use of our membership addressograph plates (excluding those for St. Louis and St. Louis County) for an anticipated mailing. It was moved and seconded that their use of the addressograph plates be approved, provided the contents of the mailing are approved first by the officers of the Association. The motion carried.—Referred to Miscellaneous Affairs Committee.]

CURTEMAN CASE

Legal Counsel indicated that additional time has been allowed by the Court for filing of the transcript on the Curteman Case appeal. At the present time it must be filed by August 3. However, additional time may be obtained if it cannot be filed by that date.

MATTERS REFERRED BY HOUSE OF DELEGATES

The Chairman then referred some of the resolutions passed by the 1970 House of Delegates to particular Commissions. Resolutions referred to the Commission on Public Affairs are on New Member Indoctrination and Programs for Rural Emergency Medical Services. Resolutions referred to the Commission on Continuing Medical Education and Health Manpower are Continuing Medical Education (Study Oregon Plan), Diploma Nursing Education, Interim Scientific Meeting and Health Manpower in Rural Areas. Those referred to the Commission on Medical Economics, Third Party Medicine and Governmental Relations are Improper Decisions Against Part A Medicare Patients by St. Louis Blue Cross, Utilization Review Committees, Extended Care Claim Rejections, HEW's Nullification of Utilization Review, Negotiation of Professional Fees and Recommended Study of Blue Shield Plans.

REPORT OF THE PRESIDENT

Dr. Fisher reported that Vice-President Spiro Agnew has declined the invitation to speak at the annual banquet next year in St. Louis and asked the Council for

suggestions regarding a speaker. Dr. Benoit suggested Irving Page, Editor of *Modern Medicine*, New York; Dr. Miller suggested Tom Tierney of the Social Security Administration; and Dr. Hansbrough suggested Robert Myers of the Social Security Administration.

Dr. Fisher stated that Dr. E. Grey Dimond is still very optimistic about the Medical School in Kansas City. Dr. Noback said that they have been encouraged by the recommendation of the House Appropriations Committee.

Dr. Fisher then read several communications between him and Dr. Stewart of Columbia regarding the proposed Crippled Children's Treatment Center in Kirksville. Dr. William Allen then gave a brief résumé of what has taken place regarding the proposed Treatment Center since application for the Center was made approximately three years ago.

Dr. Fisher reported that he had received a communication from the National Society for the Prevention of Blindness regarding legislation to insure the use of shatter resistant lenses. A suggested bill that is being introduced in several other states was attached. It was moved and seconded that this matter be referred to the Commission on Interspecialty Medicine for report back to the Council. The motion carried.

Dr. Fisher stated that he had received a communication from the Nevada State Medical Association regarding their nomination of Wesley Hall, M.D., into candidacy for President-Elect to the AMA and asking for MSMA support.

Dr. Fisher requested Council approval of a third amendment to the Trust Indenture of the MSMA Employees' Pension Program concerning our Managing Agency Agreement with Mercantile Trust Co. National Association, St. Louis, as proposed by our legal counsel in order to meet IRS requirements. It was moved, seconded and passed to approve this requested third amendment.

JOINT MEETING

■ Dr. Gunn then asked Dr. Miller to give a brief report of the joint meeting held on Friday evening, May 22, with representatives of the Missouri Association of Osteopathic Physicians and Surgeons and the Missouri State Board of Registration for the Healing Arts. Dr. Miller reported the following persons were in attendance at the meeting: Drs. R. A. Michael and Wm. H. Voss and Mr. Ed Borman of the Osteopathic Association; Dr. Still and Mr. Hailey of the State Board; and Dr. Matthews, Messrs. Noble, McIntyre and Cooper and Dr. Miller of MSMA. Dr. Miller stated that he felt the meeting was a fruitful one. Continued medical education for physicians was discussed and all present were totally supportive. Out of this emerged an agreement supporting the need for a required continuing educational program and a recommendation that this philosophy be submitted for development and be brought back to this liaison committee for further assessment.

The General and Professional Corporation Laws in Missouri, under which various groups of physicians are incorporated, were discussed. Dr. Miller reported that since few of the people present were knowledgeable regarding these laws, it was agreed that the two Association Secretaries and their legal counsels research this matter and report at the next meeting of the liaison group.

Dr. Miller stated that the following matters involving possible health legislation were discussed:

1. *Statute of Limitations for Malpractice Suits*—it was decided to recommend no change in the present Missouri law, but to be in a position to properly react in case any effort is made to introduce legislation in the next session to change the law.

2. *Change in Present Abortion Law*—The MSMA House of Delegates 1970 action was discussed, but no group action taken on this item.

3. *Citizenship Requirement for Physician Licensure*—Dr. Miller reported that the Attorney General of Missouri had set forth an opinion declaring the citizenship requirement unconstitutional and had stated that the State Board would need to read and digest the Attorney General's opinion before acting on this matter.

4. *Population Control Measures*—No action was taken.

5. *Little Hoover Commission Recommendations Regarding State Boards*—Mr. Hailey presented his views concerning the Little Hoover Commission recommendations regarding licensing boards. It was his feeling that because the two previous commissions had submitted identical recommendations, the present Commission probably would recommend that all licensing boards be consolidated under one executive director which could produce many problems. At the present time, there are 14 separate state boards.

6. *Paramedical Groups and Medical Assistants*—Dr. Miller reported that MSMA is studying the possibility of proposing programs for training new types of medical assistants and will report developments to this liaison committee.

The subject of possible changes in the present Missouri Medical Practice Act was introduced. Dr. Miller stated that it was decided that this matter be placed on the agenda for the next joint meeting.

It was moved and seconded to approve Dr. Miller's report of the meeting with the Osteopathic Association and the Board of Healing Arts. The motion carried.—**Referred to Miscellaneous Affairs Committee.**]

REPORT OF AMA DELEGATES

Dr. Gunn asked Dr. Neilson to give a report of the Delegates to the AMA. Dr. Neilson gave a run-down on the dates, times and places of the official meetings to be held during the AMA Annual Session in Chicago starting on June 21, 1970. He indicated that the Delegates' Handbooks would be mailed on May 25. Dr. Neilson stated that he had been assigned Chairman of Reference Committee "B," handling matters of legislation. He said that Dr. Washburn would be in charge of caucuses and will work with the delegates, alternates and officers to assure coverage of all reference committees. He stated that it is hoped that Dr. Benoit's name will be placed on the nominee list for the Council on Medical Service.

Dr. Neilson reported that Dr. Peterson would see that all Missouri resolutions not related to the Himler Report are supported in reference committees. He stated that Dr. Benoit will be in charge of Himler Report resolutions of which we have 14. All reference committees except Committee "B" will have a share of these Himler resolutions.

Alternate delegates were requested to be available to help the delegates and to assist in hosting the Headquarters Room.

It was moved, seconded and carried to accept the AMA Delegates' Report.

REPORT ON ENVIRONMENTAL HEALTH

■ Dr. Neilson reported that the April Governor's Conference on Urban Affairs was a success with 550 persons in attendance. He stated that he had the honor of serving as cochairman of the Planning Committee and the privilege of giving an address at this three-day meeting. Dr. Neilson said that this meeting was so well received that it may become a yearly affair. He also reported that he had attended the AMA Environmental and Public Health Conference held in Washington, D. C. on May 3-5, which was attended by approximately 300 people from all over the country.

Dr. Neilson stated that the MSMA Woman's Auxiliary is seeking support for their 1970 state project of the education of children, PTA's, Women's Clubs, etc. on the subject of environmental pollution.

He reported that two subcommittees of the St. Louis-St. Louis County Medical Societies Committee on Environmental Health have been working on two important health problems. One committee, under Dr. Herbert Sweet, is studying the relationship between specific degrees of air pollution with specific pollutants with upper respiratory infection, asthma, cardiac reserve, etc. A second committee, under Dr. C. Howe Eller, St. Louis County Health Commissioner, has studied the problem of waste product disposal, especially as it relates to infection waste.

He stated that he hoped for Council support of these various environmental activities even though the Committee on Environmental Health has been absorbed by the Commission on Public Affairs and expressed the hope that the Chairman of the Commission will appoint an Ad Hoc Committee to permit the carrying out of the anticipated 1970 schedule of environmental projects.

It was moved and seconded that the report on Environmental Health be accepted. The motion carried.—**Referred to Miscellaneous Affairs Committee.**]

REPORTS OF DISTRICT COUNCILORS

Dr. Martin, First District, reported that Buchanan County Medical Society held a joint meeting with the dentists which was well attended. He stated that he had attended a Northwest Missouri Medical Society meeting in Maryville which featured a scientific program sponsored by Merck & Company in the afternoon. Dr. E. Grey Dimond talked about the proposed new Medical School in Kansas City. He stated that his area was having problems with Missouri Comprehensive Health Planning and requested assistance from the MSMA staff.

Dr. Bach reported on the Second Councilor District meeting held at the Holiday Inn in Hannibal on March 10. Dr. Grey Dimond and Senator Richard Southern were the speakers at this well-attended meeting. He stated that the Hannibal area is in the process of organizing a measles immunization program and working to secure more physicians for the area. He stated that they have acquired the services of two new physicians and possibly a third.

Dr. Gunn, Third District, reported that the St. Louis Medical Society Council has gone on record favoring the updating of fee schedules by Medicare and Medicaid. He called attention to the Medical Society Athletic Injuries Conference for High School and College Coaches. He also stated that Telelecture programs have been arranged in the Medical Society Building in St. Louis. The Society also is working with Bi-State Regional Medical on several programs.

Dr. Fisher stated that Dr. Edwards, President of St. Louis Medical Society, had spoken to him about updating fee schedules, taking into consideration not only the increased costs of medical care, but also the cost of living index. He said that Dr. Edwards proposed that not only Medicare and Medicaid fees be revised, but also that the UCR fees in all categories of service be revised.

Dr. Mayer, Fourth District, reported that the annual Legislator-Physician dinner, sponsored by the St. Louis County Medical Society, was held on April 10 at Stouffer's Inn in St. Louis. Approximately 200 persons attended, including about 15 legislators. Unfortunately, many of the legislators did not attend because of labor difficulties at the Inn. He said the occasion was a fair success.

Mr. Mothershead called attention to the award from the Missouri Press Women to Miss Jean Duensing for editing MISSOURI MEDICINE. On motion of Dr. McCraw, duly seconded, the Council voted to send a letter of congratulations to Jean Duensing for her award.

■ Dr. Cope, Fifth District, reported on a meeting with representatives of St. Louis Blue Cross and physicians from the Boone County Hospital staff and Medical Society regarding Medicare problems. He stated that a physician has been employed by Blue Cross two hours a day so far and possibly may be employed full time to aid in adjudicating Medicare cases. Many problems con-

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"Congress and the 1970's As Seen by the Chairman of the House Committee on Internal Security" was the subject of an interesting address by the Honorable Richard H. Ichord, Member of the U. S. Congress from Missouri's Eighth District, guest speaker at the General Luncheon on Saturday (top).

MSMA Councilor E. A. Stricker (left), Treasurer Max S. Franklin and President Joseph L. Fisher at the luncheon. Doctor Fisher presided.

The General Luncheon



(Left to right) President Fisher made the annual presentation of checks from the AMA-ERF (Education and Research Foundation) to the happy representatives of Missouri's four medical schools: Dean Robert H. Felix, St. Louis University; Dean William D. Mayer, University of Missouri-Columbia; Dr. Ronald G. Evens, Washington University; and Dean Richardson K. Noback, University of Missouri-Kansas City. AMA-ERF receives contributions and grants from various sources and the money is allotted annually to medical schools throughout the country. U. S. Representative Ichord adds his smile of approval.

cerning long term cases, demands for complete histories, etc. were discussed. He stated that Blue Cross refused to consider the AMA type of discharge summary which had been suggested, stating they would still require histories. He said the meeting adjourned after about two hours and apparently little was accomplished.—**Referred to Resolutions Committee.]**

Dr. Bradshaw, Sixth District, reported concern over the lack of medical personnel in his area, increasing malpractice problems and the need for assistance with CHP.

Dr. Chandler, Seventh District, called attention to a full page ad which appeared in the *Kansas City Times* in regard to the new medical school in Kansas City. The Executive Council of Jackson County authorized the expenditure of \$2,400 to pay for the ad which was endorsed by 80 health organizations. He also mentioned that through the efforts of Mr. Allen Smith and a letter written to CBS in regard to the recent controversial TV programs, Station KCMO is providing 30 minutes time for rebuttal on June 30 at 9 PM. Four physicians will be on the panel with Allen Smith as moderator and Dr. Benoit as one of the panelists. It is planned to give a positive presentation on what medicine is really doing.

Dr. McAlhany reported that the Eighth Councilor District will have a meeting on Monday, May 25 at the Holiday Inn in Springfield with Dr. Wilbur of the AMA and Dr. Fisher being the featured speakers. He also mentioned that Mr. Baker of St. Louis Blue Cross visited Greene County recently and explained some of the directives of the Social Security Administration in regard to Medicare payments.

Dr. Hansbrough stated that the Tenth Councilor District meeting will be held on June 7 with Senator Symington and Dr. Fisher as guest speakers.

The Chairman then said that according to the new section of the Constitution and By-Laws pertaining to the restructuring of committees and commissions, Subsection c. states that the Chairman of the Council shall appoint each year an appropriate Councilor to serve as advisor to each respective Commission. Accordingly, the Chairman made the following appointments: Commission on Interspecialty Medicine, Dr. Robert Mayer; Commission on Medical Economics, Third Party Medicine and Governmental Relations, Dr. John Martin; Commission on Public Affairs, Dr. James C. Cope; Commission on Continuing Education and Health Manpower, Dr. E. T. Hansbrough; and Commission on Medical-Legal Affairs, Dr. Howard J. McAlhany.

FUTURE MEETINGS

Mr. McIntyre reported that several requests had been received from various interests regarding exhibit space at our annual sessions. He said he had checked other state medical societies and found that several had fairly broad policies in accepting exhibits. After considerable discussion, and on advice of legal counsel, it was decided that since our meetings are scientific, our exhibits should contribute to this basic concept. It was recommended that the status quo on types of exhibits be maintained.

HONOR GRADUATE AWARDS

Mr. Tom Fox reported that annually the Missouri State Medical Association presents a \$100 U. S. Savings Bond and a Certificate to the outstanding graduate from each

of the three medical schools in Missouri. This year's awards will be presented to the following: Wilfred W. Cox, Smithville, University of Missouri School of Medicine, Columbia; Thomas F. Barrett, St. Louis, St. Louis University School of Medicine; and Alexander L. Miller, Greenwich, Conn., Washington University School of Medicine. The presentations will be made early in June at the time of graduation at the various schools.

1971 OFFICERS CONFERENCE

■ Mr. McIntyre stated that the 1970 Officers Conference was held in conjunction with the Council meeting last January and worked out very well. It was suggested that the Officers Conference be placed under the supervision of a committee or commission to help in planning the program. After discussion, on motion of Dr. Stricker, duly seconded, it was decided that the Officers Conference be placed under the supervision of the Commission on Public Affairs and that the Conference again be held in conjunction with the Council meeting in February of 1971.—**Referred to Miscellaneous Affairs Committee.]**

ANNUAL SESSION DATES

Mr. McIntyre reported that annual session dates are becoming more difficult to secure each year and must be selected four or five years in advance to get the dates desired. He gave the dates for 1971 and 1972, the possible dates for 1973 in St. Louis and a tentative date in 1974 in Kansas City at the Muehlebach Hotel. Dr. Miller stated that barring labor troubles, a number of new places could possibly be available in a couple of years and, perhaps, we might be able to wait until we can consider them. It was pointed out that a tentative hold could be placed on the dates listed, particularly the 1974 dates in Kansas City, with no obligation. After discussion, on motion, duly seconded, it was agreed that a tentative hold be placed on the dates of April 25-28, 1974, at the Muehlebach Hotel. If better facilities do not become available, the Executive Committee can make a firm date.

EMPLOYEES' PENSION PROGRAM

Mr. McIntyre mentioned that an amendment to the Employees' Pension Program, as directed by the Council, has been drawn up by legal counsel to be officially signed. It would raise the cut-off date for any employee from age 60 to age 61 in figuring the average of the five highest years of income for determining retirement income. The amendment also would permit the employee, with the consent of the employer, to elect to receive any payments by reason of his prior, early or late retirement in a lump sum. On motion of Dr. McAlhany, duly seconded, this amendment to the Employees' Pension Program was approved.

NEXT COUNCIL MEETING

Dr. Miller, President-Elect, extended an invitation to the Council, Officers and Staff to hold the fall Council Meeting in Kansas City on Oct. 2, 3, 4, 1970. Friday, October 2, will involve special activities. Saturday and Sunday, October 3 and 4, will be devoted to business, as usual. The Chairman, on behalf of the Council, accepted Dr. Miller's invitation.

PEER REVIEW

■ Dr. Froelich, Chairman of the Ad Hoc Committee on Peer Review reviewed the minutes of the meeting held

in the Headquarters Office on April 19, 1970. The Committee agreed that it should recommend to the Council that regional peer review committees be established to investigate deviations from the norm and to offer judgments on the propriety of fees, quality of care rendered and utilization of care. It is intended that third party carriers or county medical societies may refer to the regional committee problem cases for the purpose of:

1. Assisting third party carriers in maintaining quality care on a usual, customary and reasonable fee basis;
2. Assisting county medical societies in providing fair and just consideration of constituent physicians by third party carriers *after* the county society has reviewed the case in question.

In general, it is intended that the regional committee be an arbitrator and guide between physicians and third party carriers.

The Committee recommended that the state of Missouri be divided into six peer review regions as follows:

Peer Review Region	Councilor Districts	Welfare Recipients	M.D.'s
A	1, 6 and 7	52,541	1,316
B	2	10,420	75
C	3 and 4	86,491	2,598
D	5	10,242	410
E	8 and 9	38,253	412
F	10	42,186	239

Region A is generally that area already mediated by the Kansas City Blue program and is left undisturbed. It is the opinion of the committee that this area is already functioning in an excellent manner and should not be disturbed. The other regions have been chosen primarily to conform with Councilor Districts.

The regional committees would be composed of five, paired, proportionate specialty members appointed by the Councilors. It is recommended that each Committee elect Co-Chairmen. All Regional Committees will have access to specialty society review committees.

It is recommended that a five-man State Policy Coordinating Committee be appointed by the Council. The duties of this committee will be to (1) direct action of Regional Committees, (2) advise Regional Committees, (3) prepare and disseminate educational material brought forth by Regional Committees and (4) report to and be responsible to the MSMA Council. The members of this Committee should not be members of Regional Committees.

Dr. Froelich said the Committee felt that at this time, it was difficult to prepare a detailed budget because of lack of statistics. The Committee recommends that full time administrative staff, including secretarial help, be employed and that per diem and travel costs for members of the District Review Committees be paid. The Committee estimated a budget of \$50,000.

The Committee also recommends that the Council obtain legal and accounting recommendations on the handling of funds. Perhaps a separate not-for-profit Foundation could be chartered.

The Committee considered the following methods of financing the peer review structure: (a) A per case review charge, to be paid by third party carriers or county medical societies; (b) A per welfare recipient charge, i.e. (if state has 240,000 welfare recipients, peer review for Medicaid would be furnished to the Division of

Welfare for a flat annual rate per recipient); (c) Annual assessment of members of MSMA; (d) Regional Medical Program funding.

Dr. Froelich stated that he and Dr. Bregant, along with Ray McIntyre and Royal Cooper had met in the offices of Proctor Carter to discuss the above plan in relation to Medicaid. Mr. Carter would be willing to assist in the financial needs, if the money is available. He further endorsed and encouraged expansion and implementation of this peer review mechanism.

It was reported that the AMA Legislative Department has proposed and drafted legislation for a program called PRO (Peer Review Organization) to be introduced in Congress. This program defines Peer Review and would provide for agreements between state medical societies and the Secretary of HEW for the establishment and operation of a peer review program under Part B. The legislation would authorize state medical societies to commission and regulate review panels. The expenses of this program would be reimbursed from the Part B Medical Insurance Trust Fund.

After considerable discussion by all the Councilors present, it was agreed that the Peer Review Region "B" and "D" be grouped together in view of the small number of physicians in Region "B," which would include Councilor Districts #2 and #5. Peer Review Region "C" would remain the same; Region "E" would become Region "D"; and Region "F" would become Region "E."

On motion of Dr. Bradshaw, duly seconded, it was agreed to accept the Peer Review Regions as amended. It also was agreed, on motion of Dr. Cope, duly seconded, that the President be empowered to appoint a five-man State Policy Coordinating Committee.

The Chairman directed the Councilors to submit the names of their Peer Review Committee appointments to the State Office not later than July 1, 1970. In view of these new committee appointments, the present Ad Hoc Committee on Peer Review is dissolved.

Discussion followed regarding methods of funding for the estimated budget presented by the Committee. It was suggested that if all physicians would forego 1% of their fees from Medicaid, this could provide a budget of \$70,000; or if they would forego three fourths of 1%, matched by Medicaid, this could provide more than \$105,000. It also was suggested that funds be requested from Regional Medical, Comprehensive Health Planning and the Blue Plans in both Kansas City and St. Louis, etc. It also was suggested that the Council command a certain amount of money to secure the service of the proper administrative personnel.

On motion of Dr. Fisher, duly seconded, the Council approved investigating and securing monies immediately from (1) the Blues in Kansas City; (2) the Council consider appropriating additional monies to launch this program; and (3) investigate, through this five-man State Coordinating Committee, the possibility of funding through the Regional Medical Program and the Welfare Department in Jefferson City and the possibility of apportionate fees and matching monies from the Welfare Department.—Referred to Resolutions Committee.]

REPORT ON LEGISLATIVE AFFAIRS

■ Dr. Matthews, Chairman of the Committee on Legislative Affairs, gave the following report:

He stated that the third Special Session of the 75th General Assembly is underway and members of the Leg-

islature may consider only that legislation which is suggested by the Governor. He said that there are four bills which MSMA has been watching closely.

The House Appropriations Committee added \$4,026,100 to the appropriation for the University of Missouri system to provide the state's share to construct a medical school in Kansas City. This same amount was approved by the full House. Dr. Fisher sent a letter to all legislative leaders, the Governor and Lieutenant Governor at the opening of the Special Session reiterating the support of the MSMA for the Kansas City School and expressing hope that the money will be found to fund the project. Jackson County Medical Society was principal supporter of a full-page advertisement backing the school appropriation which was printed in the *Kansas City Times*. Copies of the advertisement with a cover letter from the Jackson County Society were addressed to all members of the Legislature, shipped to Jefferson City by air freight and placed in the mail boxes of all legislators by members of our staff.

Dr. Matthews indicated that a bill has been introduced which would correct present defects in the drunken driving test bill. Dr. John Crowe of Cape Girardeau and Dr. Allen Klippel of St. Louis County, both members of the MSMA Commission on Public Affairs, appeared at a House Committee Hearing to support the measure.

A bill calling for the licensing of nursing home administrators under their own board was introduced at the Governor's recommendation. It was necessitated by a new federal regulation and non-compliance by Missouri could lead to a loss of some Medicaid funds. The position of this Council and of the House of Delegates that such licensing should be under the Board of Health was presented to the bill's sponsor, Representative Charles Dickey of Mexico, along with our reasons. The bill has been amended somewhat in committee, but still calls for a separate board.

A so-called model bill concerning drug abuse was introduced in the House of Representatives, but the Judiciary Committee decided the bill was far too long and complicated and cut it down from more than 35 pages to about seven pages. The measure still is awaiting action by the House.

Dr. William Allen gave a brief run-down on federal legislation regarding drug abuse which was introduced in Congress by the Justice Department and which gave the Attorney General's office the authority to determine which drugs would be on the list included under this legislation. He indicated that this proposed federal legislation also gave authority to the Justice Department to require that each physician keep a definite record of every dose of the drug, to whom he gave it and when it was to be taken: if he failed to keep these records, he would be subject to criminal action and would have no recourse against it. Mr. McIntyre stated that the AMA has definitely been opposing legislation. Dr. Matthews indicated that the staff would keep an eye on this.

It was moved and seconded to accept the report of the Committee on Legislative Affairs. The motion carried.

It was moved and seconded that if the appropriation for the Kansas City Medical School fails or passes, a proper news release should be issued by the MSMA accordingly. The motion carried.—Referred to Miscellaneous Affairs Committee.]

SAMA PROGRAM

■ Dr. Matthews presented a run-down on the proposed extern program presented by SAMA and MECO (Medical Education Community Orientation). He stated that this would affect medical students who have been accepted in September, prefreshmen or freshmen. Forty-three hospitals in Illinois last year participated in this program jointly sponsored by SAMA, the Illinois State Medical Association, the Illinois Hospital Association and the Illinois Academy of General Practice. The externs are paid approximately \$75.00 per week by the hospital for a ten-week period or \$750 per student. The program consists of individually-oriented educational programs in community hospitals, stressing exposure to clinical situations and hospital operation. In each program, students will rotate through a series of clinical and non-clinical areas of the hospital under the direct supervision of physicians and staff. To be eligible for participation in the project, a student must (1) have completed one year of medical school by June or have been accepted for entrance into a medical school by September and (2) be a member of the SAMA.

Dr. Matthews stated that SAMA has approached the MSMA with the same idea for Missouri and it was his thought that this should be turned over to the Commission on Continuing Education and Health Manpower for discussion and consideration prior to taking any action on the program. He pointed out the extern program carries no credit and possibly would conflict with the preceptor program which has been in operation for some time at the University of Missouri Medical School.

Following further discussion, the Chairman referred the SAMA matter to the Commission on Continuing Education and Health Manpower for study and recommendation.

REPORT ON CONTINUING EDUCATION AND HEALTH MANPOWER

Dr. J. F. McDonnell, Chairman of the MSMA Commission on Continuing Education and Health Manpower, gave the following report of a meeting of the Commission held in Jefferson City on May 17, 1970.

Dr. McDonnell stated that the 112th Annual Session was reviewed and criticized from various standpoints. In view of several scientific sessions having poor attendance, it was agreed that for the 113th Annual Session (1) concurrent scientific sessions on Friday and Saturday will be changed from three to two; (2) the opening session on Friday morning at 9:00 will be an outstanding solo program with no other concurrent sessions; (3) the general luncheon on Friday will not be scheduled in deference to the luncheons sponsored by specialty organizations and other groups meeting with the MSMA; and (4) the general luncheon on Saturday at 12:30 PM will be scheduled and, for the 113th Annual Session, the MMPAC will be invited to provide the speaker or speakers to discuss "Concepts of Political Action." It was further agreed, as in the past, that sponsors for scientific sessions will include (a) voluntary health organizations, (b) organized specialty groups and (c) MSMA Committees.

Dr. McDonnell indicated that it was generally agreed by members of the Commission that the 113th Annual Session should include a program covering various existing and proposed health care systems and that a program should be offered also for the information of the

physician and the public on the subject of "Medicare and Medicaid—Why do they cost so much and what is the proportion of this cost actually paid to the physician and other health services providers."

He stated that in accordance with the new Bylaws, the Commission Chairman appointed the following Ad Hoc Committee to serve for one year to plan and develop the 113th Annual Session: Drs. Edward D. Kinsella, Chairman; W. Wayne Boydston; Paul R. Young; George R. Ladyman; B. J. Bass; and W. Thomas Morgan, Jr. (A copy of the proposed scientific sessions program was distributed to the Council.)

The Chairman also appointed the following Ad Hoc Committee on Continuing Education to serve for one year: Drs. Paul R. Young, Chairman, and A. Sherwood Baker, Missouri University Medical School. It was agreed that further consideration should be given for additional appointees to this Ad Hoc Committee, including representatives from St. Louis University School of Medicine and Washington University School of Medicine.

This new Ad Hoc Committee was informed that possible referrals by the MSMA Council may include a resolution approved by the House of Delegates regarding a study of the "Oregon Plan," which proposes attendance at specified continuing education programs as a requirement for continued membership in the state medical association.

Dr. McDonnell stated that reference was made in the meeting to a recent action of the MSMA House of Delegates regarding consideration for an interim scientific session. In the discussion which followed, mention was made of the possibility of such programs being scheduled and conducted at the regional level. This concluded Dr. McDonnell's report.

Dr. Fisher expressed his concern regarding development of a program to obtain more physicians for the state of Missouri. Dr. McDonnell indicated that he was sure this was part of his commission's duties and would keep this in mind. He then indicated that he would welcome suggestions from the Council regarding specific topics or speakers for the scientific sessions of the 113th Annual Session.

It was moved and seconded to accept the report of the Commission on Continuing Education and Health Manpower. The motion carried.

Dr. Gunn called for any additional business. There being none, the Council adjourned at 12:00 noon.—*Referred to Medical Education Committee.*

Meeting of Oct. 3-4, 1970

Walter T. Gunn, M.D., St. Louis, Chairman, called the meeting to order. Those present were Drs. Gunn; Joseph L. Fisher, St. Joseph; Gerald L. Miller, Kansas City; John I. Matthews, Jefferson City; Max S. Franklin, St. Louis; John N. Martin, St. Joseph; Robert A. Mayer, Clayton; James C. Cope, Columbia; William D. Bradshaw, Clinton; R. Allen Chandler, Kansas City; Howard J. McAlhany, Springfield; E. A. Stricker, St. James; Eugene T. Hansbrough, Poplar Bluff; Doyle C. McCraw, Bolivar; J. Loren Washburn, Versailles; Hector W. Benoit, Kansas City; Stanley S. Peterson, Springfield; William C. Allen and William D. Mayer, Columbia; M. Kenton King, St. Louis; Robert H. Felix, St. Louis; Richardson K. Noback, Kansas City; Charles R. Gulick and Herbert Wiegand, St. Louis; Paul R. Young and John F. McDon-



Retiring President Joseph L. Fisher (left) congratulates Incoming President Gerald L. Miller as he hands him the President's gavel at ceremonies during the President's Banquet. This gavel has been used by the President at Annual Sessions for many years.

nell, Kansas City; Henry V. Guhleman, Jefferson City; George Thoma, St. Louis; Donald M. Spencer, Kansas City; Messrs. John W. Noble, Kennett; Tim Norbeck, Clayton; Hollister Smith, St. Louis; Allen D. Smith, Kansas City; Edward M. Hirsch, St. Joseph; Ray McIntyre, Tom Fox, Bob Carroll, and Royal O. Cooper, Staff, Jefferson City.

The Chairman called the meeting to order at 9:30 AM and introduced Drs. Robert H. Felix, St. Louis University; M. Kenton King, Washington University; and William C. Allen of the University of Missouri-Columbia.

Dr. Gunn requested approval of the minutes of the Council meeting of May 23-24, 1970. On motion, duly seconded, the minutes were approved as published.

The Council stood for a moment in silence in memory of Tom O'Brien and it was suggested that a letter of condolence be sent to Mrs. O'Brien.

REPORT OF THE EXECUTIVE SECRETARY

■ Mr. McIntyre, on behalf of the Council and guests, expressed gratitude to Dr. Miller for the wonderful time they had on Friday.

Mr. McIntyre called attention to the recent opinion from the Attorney General's office which states that the Missouri law which requires physicians to be citizens of the United States in order to be licensed is unconstitutional. Following this ruling, he stated that approximately 40 foreign physicians were granted Missouri licenses by reciprocity on August 15. On September 18, the State Board of Healing Arts gave the regular examination to about 205 physicians of whom 195 were non-citizens. The results of that examination will not be known until about the end of October.

In view of this situation, there will be a number of licensed noncitizens who will apply to some of our county medical societies for membership. It was pointed

out that the Bylaws of MSMA call for citizenship requirement, which also would restrict the county societies to the same requirement. This matter had been referred to our Legal Counsel for study and advice.

Mr. Noble presented a brief explanation of the various sections of the Constitution and Bylaws which pertain to this problem. He stated that since the Council has the judicial and executive power between sessions of the House of Delegates, the logical and legal course would seem to be that the Council by motion suspend the required provision of citizenship as it appears in the present Bylaws.

After further discussion, on motion of Dr. Hansbrough, duly seconded, it was agreed that until such time as the questioned Bylaw can be eliminated at the Annual Meeting, the Council suspend the required provision of citizenship as it appears in the Bylaws on the grounds set forth in the Attorney General's opinion of May 22, 1970, known as Opinion No. 276, and that each county society be informed of this action and that the Council instruct the MSMA Committee on Constitution and Bylaws to prepare amendments to the present Bylaws to conform to this action for submission to the House of Delegates in April, 1971.

Mr. McIntyre reported that he and Mr. Noble attended the AMA Legal Conference held in Chicago on September 18. This is an annual meeting which is attended by members of the various State Associations and their legal counsels. The program included discussion of professional liability insurance. He stated that an AMA committee has been working on a proposed national professional liability insurance program but with little success.

He reported that the AMA Committee will continue to work on this problem and, hopefully, a more complete report will be given at the AMA House of Delegates meeting in December. Mr. McIntyre stated that the MSMA Commission on Medical-Legal Affairs is studying this matter. Information has been gathered from a number of State Associations for the Commission to study.

Jackson County is considering a pilot project of professional liability insurance for their area with CNA. Mr. Smith stated a questionnaire is being sent to the members of the Jackson County Medical Society regarding this proposed project.—Referred to Constitution and By-Laws Committee.]

Mr. McIntyre reported that the Missouri State Medical Foundation's tax free status has been reconfirmed by the IRS. He stated also that the IRS is looking at medical journal advertising as unrelated income and, therefore, as taxable.

Mr. Fox reported that a meeting of the Board of Trustees of the Missouri State Medical Foundation was scheduled for Friday evening prior to the Council meeting. Because of conflicting circumstances, however, it was necessary to cancel the meeting.

REPORT OF THE TREASURER

Dr. Franklin reviewed the Financial Report which had been distributed to the Council and Officers. He stated that some funds had been invested and are producing reasonable interest. He also stated that we are staying within our budget. On motion, duly seconded, the Treasurer's Report was approved.

REPORT OF COMMISSION ON PUBLIC AFFAIRS

■ Dr. Guhleman, Chairman of the Commission on Public Affairs, presented a report on the meeting held in Jefferson City on September 20. He stated that nine of the 15 members were present.

One of the items referred to the Commission was the 1971 County Society Officers Conference which is scheduled for January 30-31. Among the points discussed were the need to find ways to make the Conference appealing to young members of the organization, to find out what they want and how to provide the information. Dr. Guhleman reported that Dr. Richard S. Wilbur, Deputy Executive Vice-President of the AMA, has accepted the invitation to be the banquet speaker at the Officers Conference. Dr. Guhleman appointed Dr. Richard Bowles of Liberty as Chairman of an Ad Hoc Committee to plan the Conference.

The next item of discussion was the resolution passed by the MSMA House of Delegates in regard to a possible new member indoctrination program during annual meetings of the Association and, particularly, the portion of the resolution which stated that "a new member be required, as part of his membership requirement, to attend the MSMA annual meeting and be registered for the indoctrination session within three years of starting his practice." In discussion, it was pointed out that possibly this particular portion of the resolution would require a change in the Bylaws of the State Association as well as that of various county societies in regard to membership requirements. Mr. Noble stated that the wording seems to be a little harsh in that their membership could automatically be terminated if they did not meet this requirement and some rather serious complications could develop.

The Commission recommended to the Council that such an indoctrination program during annual meetings be considered, possibly on Thursday, the opening day of the annual session. Dr. Guhleman appointed Dr. Troy Morgan as Chairman of an Ad Hoc Committee which will have charge of planning an indoctrination program upon direction of the Council.

Dr. Guhleman then presented the text of a resolution passed by the MSMA House of Delegates dealing with the subject: "Programs for Rural Emergency Medical Services." It was suggested that work is needed in the field of emergency medical care with the Association working toward establishment of adequate ambulance service in all areas of the state as well as better emergency care. Dr. Allen Klippel was named Chairman of an Ad Hoc Committee on Emergency Medical Services to work with state agencies and others interested in this field. Dr. Crowe will work with Dr. Klippel on this project.

Dr. Neilson outlined the activities of his Ad Hoc Committee on Environmental Health and mentioned two projects now in progress: (1) The disposal of hospital solid waste and (2) air pollution and its effects on the health of man. Dr. Sweet of St. Louis and his committee proposed a research study and evaluation of air pollution problems. Monies were forthcoming from the medical societies of St. Louis (\$700), St. Louis County (\$350) and MSMA (\$350). The \$1,400 was turned over to Dr. Sterling as the investigator. He has been working on the project. Dr. Neilson reported that his Ad Hoc Committee, under the Public Affairs Commission, will keep abreast of these activities.

Dr. Guhleman reported that Dr. Morgan was named Chairman of an Ad Hoc Committee on Medicine and Religion; Dr. Kendis was named Chairman of an Ad Hoc Committee to study the problems of alcoholism and drug abuse and, also, to work with county societies to provide programs and assistance in the field of alcoholism and drug abuse.

After further discussion on the various items, on motion of Dr. McAlhany, duly seconded, the report of the Commission on Public Affairs was approved except the portion regarding indoctrination of new members, which was referred back to the Commission for further study.

Dr. Gunn presented a letter received from Dr. Wolfgram of Mental Health Associates in St. Louis regarding the resolution passed by the MSMA House of Delegates concerning Medicaid Coverage of psychiatric patients and what steps had been taken to carry out this resolution. It was pointed out that the resolution was referred to the Division of Welfare, but they have taken no action on this specific item. After discussion, it was suggested that the letter from Dr. Wolfgram be referred to the Commission on Medical Economics, Third Party Medicine and Governmental Relations.—Referred to Miscellaneous Affairs Committee.]

REPORT OF THE COMMITTEE ON PLANNING

Dr. Cope presented the minutes of the Committee on Planning in the absence of Dr. Kerr, the Chairman. Dr. Cope reviewed the action of the Committee and noted

items of interest which the Committee has been considering, such as peer review, the licensure of allied health personnel, insurance relations, etc.

One item of discussion was the problem of professional liability insurance coverage. It was suggested that the new Commission on Medical-Legal Affairs seek more information concerning the malpractice situation in Missouri along with possible solutions to the problem. On motion, duly seconded, this portion of the report was referred to the Commission on Medical-Legal Affairs.

The next item discussed was the mandatory emergency physician call roster in hospitals which is becoming a growing problem in many communities and is a real crisis for medical staffs. The Committee also considered the problem of securing physicians for outstate communities.

After further discussion of the latter two items, it was agreed that they be referred to the Commission on Medical Education and Health Manpower for further study, recommendation and activation.

The Committee also discussed the need for active speakers bureaus in all sections of the state. It was noted that even though some county societies do maintain such bureaus, they are not taking an active role in making the availability of such speakers known to organizations in the area. This item was referred to the Commission on Public Affairs.

Dr. Cope stated that some news media in the state made use of the statement proposed by the Planning

The President's Banquet



Always a gala affair, the President's Banquet on Saturday signals another successful Annual Session. Among the distinguished guests at the head table were (left to right, top row) Dr. Robert A. Mayer, Chairman of the Committee on Arrangements for the meeting, and Mrs. Mayer; Mrs. Joseph L. Fisher and Doctor Fisher, Retiring President; Incoming President Gerald L. Miller and Mrs. Miller; and Mrs. Russell B. Roth. (Bottom row) Dr. Russell B. Roth, Speaker of the AMA House of Delegates and guest speaker at the banquet; Mrs. Lawrence W. O'Neal and Doctor O'Neal, President of St. Louis Medical Society; Mrs. Frank J. Valach, President of the MSMA Woman's Auxiliary, and Doctor Valach; and Mrs. G. Prentiss Lee, President-Elect of the Woman's Auxiliary to the AMA.

Committee and approved by the Council relating to cut-backs in the Missouri Medicaid Program.

On motion, duly seconded, the report of the MSMA Committee on Planning was approved.

PRESIDENT'S REMARKS

Dr. Fisher reported he had had the pleasure of attending the Kentucky State Medical Society meeting which was very interesting. He said the program is designed to keep all members together the first two days. At the end of the session, they had a noon luncheon which was attended by more than 500 people, namely, ancillary personnel, nurses, dentists, druggists, lawyers and other allied personnel. Awards were presented to the lawyers, a number of doctors and some of the nurses and to one of the leading clinical teaching professors. This gives the profession a much stronger hold on matters of medicine throughout the entire state. He also stated that Kentucky takes a strong stand against cultists.

Dr. Fisher called attention to the fact that young physicians just starting in practice within our state have a higher cost of overhead. They have to buy their equipment, home and, perhaps, a new office building. Their overhead is much higher now than in years past, and no fee schedules are available to guide them in setting fees for their services. He suggested that some helpful information on these matters might well be made available for young physicians.

Dr. Fisher also called attention to the University of Missouri's Postgraduate Program. He stated that some of the smaller hospitals might like to have a program in the morning and to avail themselves of a speaker. We could find out what subject or subjects they were interested in. He noted the Councilors could pass this information on to their constituents and tell them to write to the University of Missouri and let them know what they would like to have. They can have a half day or all day program with a professor or associate professor and, possibly, can have wet clinics.

REPORTS OF THE DISTRICT COUNCILORS

Dr. Martin reported that the First Councilor District meeting will be held on October 21. Dr. Noback will be the guest speaker. Dr. Martin also reported that a regional planning survey regarding hospital needs is being made in their area by Tom Weil of the University of Missouri. He stated that some of the recommendations being made are rather revealing and need consideration. One of the problems is hospital emergency rooms—staffing, cost, etc. Also, there are ambulance problems.

Dr. Martin also mentioned the lack of liaison with other allied personnel, such as pharmacists, dentists, hospital administrators, nurses, etc. He suggested getting together with the Missouri Pharmaceutical Association and other groups in order to keep up with what is going on.

Dr. Gunn, Third District, reported St. Louis Medical Society had an excellent Athletic Sports Injuries Conference which was well attended. He also stated that the area Peer Review committee met for the first time and that St. Louis will have Rubella Week October 24.

Dr. Robert Mayer, Councilor of the Fourth District, reported a very successful meeting on September 9 at Stouffer's Inn, sponsored by the St. Louis City and St. Louis County Medical Societies with Dr. Jose L. Garcia Oller, New Orleans, La. as the speaker. The meeting was attended by members of the staffs of most of the city and county hospitals which held their own meetings

prior to the general meeting. Four hundred and sixty-seven people attended.

Dr. Mayer also reported that the Fourth Councilor District meeting, which was planned for October, had been cancelled and will probably be held in November with Dr. Egeberg as the featured speaker. He also reported on a special meeting of the St. Louis County Medical Society Council to discuss the Bennett Amendment. Telegrams were sent to the AMA and to Washington voicing their opposition to this amendment.

Dr. Noback reported the AMA is not supporting the Bennett Amendment as was erroneously reported by a columnist. He stated that the Board of Trustees are opposed to it and that there is very little support for it throughout the country.

Dr. Bradshaw reported on a problem in the Sixth District regarding ambulance service. He stated that with the current government regulations regarding ambulances in rural Missouri the ambulance service is being wiped out and they have to call Kansas City to get an ambulance which is almost prohibitive because of cost.

Dr. Chandler reported for the Seventh District stating that the professional liability insurance, which had been alluded to earlier, formed the greater part of his report. He expressed appreciation to Dr. Fisher for the Association letter sent to Proctor Carter regarding the cuts in Medicaid payments. He then read a resolution adopted by the Jackson County Medical Society regarding the reduced benefits under the Medicaid (Title XIX) Program.

Dr. McAlhany reported that the featured speakers at the Eighth Councilor District meeting held in May in Springfield were Dr. Fisher and Dr. Richard Wilbur of AMA. They were well received. He reported that Greene County Medical Society held its annual Athletic Injuries Conference in August. He stated that Greene County Medical Society had issued a policy statement regarding physicians' reimbursement under the Medicaid Program, which was sent to the Division of Welfare. He also indicated that his District is having a problem with ambulance service.

Dr. Stricker reported that the Ninth Councilor District held a meeting on Athletic Injuries in September. Speakers for the evening were MSMA President, Dr. Fisher; David Scherr, Assistant Professor of Orthopedic Surgery, University of Missouri; and Norm Stewart, Head Basketball Coach for the University of Missouri. He reported that the hospital emergency room in the Rolla Hospital has been running quite smoothly. One physician runs the emergency room, with coverage from other physicians on his days off.

Dr. Hansbrough reported that the Tenth Councilor District held a meeting in Cape Girardeau on June 7. Guest speaker for the banquet was Sen. Stuart Symington. The afternoon session featured representatives from Comprehensive Health Planning, MRMP, Blue Cross and Blue Shield, General American Life, Division of Welfare and MMPAC. Dr. Fisher also appeared on this program.

Dr. Hansbrough indicated that his particular area is involved in three different Regional Medical Programs—Memphis, Missouri and Bi-State. He said that he understood that Bi-State RMP had gone on record as saying that health care delivery was their No. 1 concern. He wondered what this might mean in regard to our present health care delivery system.

He stated that Butler County has had a private am-

balance company for about two years which is operating at a loss every month. He felt that an ambulance service operating in a county under a population of 40,000 would require subsidization. Dr. Hansbrough indicated that he felt manning of an emergency room was no particular problem with a group practice.

GUEST SPEAKER FOR ANNUAL BANQUET

Dr. Fisher reported that the guest speaker for our Annual Banquet at the 1971 Annual Session will be Russell B. Roth, M.D., Speaker of the AMA House of Delegates. Dr. Roth is in the private practice of medicine in Erie, Pa. and is an excellent speaker.

REPORT OF COMMISSION ON INTERSPECIALTY MEDICINE

■ The following report of the Commission on Interspecialty Medicine was presented by Dr. Gulick, Chairman of the Commission, and Dr. Stoneman, one of the members of the subcommittee appointed to study the feasibility of a physician assistants program in Missouri.

Dr. Gulick indicated that the Commission on Interspecialty Medicine met on July 26 at the Chase-Park Plaza Hotel in St. Louis. He reported that Dr. Miller described in some detail the proposed MSMA peer review program.

Dr. Gulick reported that Dr. George Wakerlin, representing the MRMP, described a proposed renal disease control program. The program will include all stages of the disease beginning with prevention and ending with rehabilitation and will include all sources of funds and contributions of talents from all institutions, volunteer agencies and local, state and federal governments. The Commission approved in principle, "Preliminary Planning for a Regional, State or Multi-Regional Renal Disease Program," subject to official confirmation by the MSMA Council.

On motion of Dr. Mayer, duly seconded, the Council approved the "Preliminary Planning for a Regional, State or Multi-Regional Renal Disease Program." The motion carried.

Dr. Gulick reported that the Association had received an inquiry from the Children's Hospital Research Foundation, Inc., Columbus, Ohio, seeking endorsement of a project on "Evaluation of Nutritional Status of Preschool Children in the U. S." Preschool children in 74 communities in 40 states will be included in the study and Adair County, Missouri is one of these primary sample units. This request was referred to Dr. Francis Lieb, pediatric representative on the Interspecialty Commission. Dr. Lieb felt that the results of this study might indicate many things that are already known, but he did see some merit in it. It was indicated that a similar study was done some years ago which involved the "Bootheel" area.

On motion, duly seconded, the Council approved the study, "Nutritional Status of Preschool Children," subject to the future approval of the President of the North Central Counties Medical Society and requested that a report of the findings of the study be sent to MSMA along with a report of the previous study. The motion carried.

Dr. Gulick reported that the Council had charged the Interspecialty Commission with the responsibility of studying in depth the Physician Assistant Program. Members of a small subcommittee appointed to undertake this study are Drs. George Hawkins, William Stoneman

and Charles Gulick. The subcommittee then divided its work into three parts: Dr. Hawkins studied existing medical assistant programs and, also, attended the AMA meeting in Chicago on Health Manpower Problems; Dr. Stoneman developed a questionnaire which was mailed to all members of MSMA; Dr. Gulick took the portion regarding medical manpower problems in the state of Missouri. Dr. Gulick reported that his portion regarding medical manpower problems could be summarized by the following:

1. Medical schools in the state of Missouri evidently cannot keep up with the need for physicians to practice medicine in outstate Missouri.

2. Missouri's needs are concentrated in the rural areas since the physician-to-population ratio in the urban areas is excellent, but the rural areas are relatively deprived of medical services.

3. Without osteopaths, outstate Missouri would have a much greater problem than it has at the present time.

4. If a medical assistant program is to be of great value to the citizens of this state, the medical assistant must be utilized to a considerable extent in the area in which medical care is not readily available.

Dr. Gulick stated figures to substantiate his summarization on the medical manpower problem. As of 1965, Missouri averaged 149 physicians per 100,000 population; the U. S. average was 145. Missouri averaged 124 M.D.'s per 100,000 population; the U. S. average was 139. Missouri has 25 D.O.'s per 100,000 population; the U. S. average is 6 D.O.'s per 100,000 population. He further indicated that the four metropolitan areas of Missouri average 167 M.D.'s per 100,000 while in rural counties there are 63 M.D.'s per 100,000. Since 1921 to the present date, the M.D. population ratio has declined 30%, but in the urban areas it has declined 23% and in the rural areas 55%.

Dr. Gulick stated that in regard to Dr. Hawkins' questionnaire, which was sent to institutions now offering medical assistant programs, it is a rather lengthy study, but it came down to the fact that nobody has had such a program long enough to be of much help.

Dr. Gulick then called on Dr. Stoneman to give his portion of the report regarding the questionnaire sent to all M.D.'s.

The basic purpose of the questionnaire was to survey the opinions of the physicians or the members of MSMA. According to these opinions, there is a substantial need for a physician assistant. Well over 50% of responses were in favor of a physician assistant category in the state of Missouri. Responses received, which represent about 70% of the physicians surveyed, indicate a much larger market for physician assistants than could be satisfied by anything less than a crash program of training for a period of several years.

The survey indicated substantial differences in needs among the various specialties and suggested that while significant interest existed in rural areas, the bulk of the demand appears to be in metropolitan areas with greater interest found in the more highly organized types of practice than in smaller ones. Copies of the tabular information were distributed to the Council prior to the meeting.

Dr. Stoneman indicated that many of the returned questionnaires contained written comments which were broken down into "favorable" and "unfavorable." Res-

ervations were expressed regarding the medical-legal implications of such a program.

Dr. Stoneman stated that he had received several requests for the information in this study and asked the Council's approval to release this information.

Discussion followed regarding the results of the questionnaire. It was pointed out that if a physician assistants program were set up, most of the assistants would still go to the metropolitan areas and not to the rural areas where the problem actually exists.

Dr. Gulick reported that the following motion was made, seconded and approved by the Commission:

"Move approval of the Commission survey and report and recommend the Council move toward implementing a Physician Assistant Program and that they specifically emphasize the concept of direct supervision by the physician in contradistinction to the P. A. practicing independently; that the various disciplines of practice define and outline the needs and training requirements for the assistant for each discipline; that legislation be recommended to legally make the assistant responsible to the physician and under control of the State Board of Healing Arts."

It was pointed out that if each specialty would outline the needs and requirements of a physician assistant in each particular field, there would be some 20 different educational requirements. After further discussion, it was moved, seconded and carried that the motion of the Commission be disapproved.

On motion of Dr. Bradshaw, duly seconded, it was recommended that the Commission's work be commended and that the Commission continue to study the programs of needs and determine what further information or recommendations they can suggest at the next Council meeting. The motion carried.

On motion of Dr. Fisher, duly seconded, it was decided not to release or circulate the information regarding the physician assistants program until after a subsequent report of the Commission.

Dr. Gulick stated that during the Commission meeting, he appointed representatives from five specialty groups to attend a MRMP Cancer Planning Conference in Columbia on October 8.

On motion, duly seconded, the report of the Commission on Interspecialty Medicine was approved as amended. The motion carried.—Referred to Resolutions Committee.]

REPORT OF AD HOC COMMITTEE ON CONTINUING MEDICAL EDUCATION

■ Dr. Paul Young, Chairman of the Ad Hoc Committee on Continuing Medical Education, gave the following report regarding his Committee meeting on September 20 in Jefferson City.

He reported that his Committee considered the resolution adopted by the MSMA House in 1970 regarding an Interim Scientific Meeting. He stated that his Committee felt that due to the ever increasing number of such meetings, no MSMA Interim Session should be considered at this time.

On motion of Dr. Hansbrough, duly seconded, it was decided that no Interim Scientific Session of the MSMA should presently be held. The motion carried.

Dr. Young further reported that his Ad Hoc Committee discussed the scientific sessions held during the regular MSMA Annual Session and felt that these might be reevaluated with the thought that the annual meeting might consist only of business meetings of the House of Delegates.

Dr. Young stated that Mr. Fischer, representing SAMA,

explained the SAMA Summer Job Program. The Missouri Hospital Association approved the SAMA Summer Job Program for 1971 contingent upon endorsement by the MSMA. The program extends for ten weeks at \$75 per week, plus room and board, if needed and available, to be paid by the hospital. Generally, the student spends one week in each hospital department under the supervision of medical staff physicians. Some time can be scheduled in clinics and physician's private offices. Emphasis is on assignment to hospitals in small communities or rural areas to provide the student with opportunity for experience outside the medical center complex. Dr. Young indicated that his Committee endorsed the program, but would limit participation to prejunior and pre-sophomore students. The Missouri Osteopathic Association reported interest in the SAMA Program, and the program will be considered by their Board of Trustees at a meeting in November.

Subsequent to Council action, if favorable, the Committee recommended that a subcommittee be formed with a maximum of four persons representing MSMA, SAMA, Missouri Academy of General Practice and the Missouri Osteopathic Association to help implement the program.

Discussion followed regarding the size of the hospital in which this program would be carried out. It was pointed out that it would be in hospitals of 100-150 beds or less and the students might spend several weeks in one department or in the physician's office. Dr. Young stated that the medical schools indicated this would not interfere with their preceptorship programs.

On motion of Dr. Matthews, duly seconded, the Council approved the Committee's recommendations on the SAMA Program. The motion carried.

Dr. Young reported that his committee was appointed by the Council to study the Oregon Plan and other alternatives relative to continuing medical education. He stated that the Oregon Plan is compulsory and the California and Alabama Plans are voluntary. Dr. Rutledge Howard of the AMA reported at the meeting that, to date, 35 states have informed the AMA that they have continuing education programs or plan to develop one. Dr. Young indicated that his Committee discussed the two basic types of programs—compulsory and voluntary. He stated that the objective desired by a statewide program is to measure and maintain physician competence in order to improve the quality of patient care.

The Committee on Continuing Medical Education approved a motion to form a subcommittee with a maximum of five persons, including representatives from the MSMA and the Board of Healing Arts (M.D.'s and D.O.'s). The subcommittee would be charged with a decision on (1) type of program, either compulsory or voluntary; (2) the type of system for implementation; and (3) role of the MSMA in the implementation. Dr. Young stated that it was indicated in the House of Delegates resolution that a report of this Committee and the Council's recommendations on such report are to be submitted to the component county medical societies by Jan. 1, 1971 so that the House may act on it at the next Annual Session.

Dr. Young indicated that the AMA felt at this time that the continuing medical education program should be voluntary. He stated that in a small hospital, you might take one physician and train him; then he could go back and teach the other physicians in his hospital.

Dr. Young stated that his Committee felt that they

would not go into very specific recommendations regarding the continuing medical education program, but felt that the approval of this report would give them an opportunity to have a subcommittee go into it in more detail.

After further discussion, motion was made and seconded that the Committee's proposal regarding continuing medical education be approved. The motion carried.

A motion was made, seconded and passed to approve the report of the Ad Hoc Committee on Continuing Medical Education.—Referred to Medical Education Committee.]

STATE POLICY COORDINATING COMMITTEE FOR PEER REVIEW

■ Dr. Fisher reviewed the development of the statewide peer review program. The Council, in the fall of 1969, appointed an Ad Hoc Committee chaired by Dr. Rae W. Froelich of Lebanon to study the peer review mechanism within the state. At the 1970 Annual Session, the Council was directed by resolutions from the House of Delegates to promptly develop and implement a quality state peer review mechanism.

In May of this year, Dr. Froelich's committee recommended prompt establishment of a state program divided geographically into five areas superimposed upon existing councilor districts. The major objectives of this program are as follows:

1. Appropriateness of care as related to utilization and modality of treatment.
2. Cost—Are fees charged usual and customary?
3. Maintaining the quality of care at an appropriate level.
4. Provide education for both physicians and the public.

Dr. Froelich's committee realized that if peer review is to function effectively, it should include all physicians within the state and that osteopathy should be invited to participate. A joint meeting of MSMA and MAOPS officers was held. He said we are pleased that the osteopathic physicians are participating in our peer review project and the Foundation.

The function and responsibility of the State Policy Coordinating Committee would be to screen cases and forward them to the regional panels. They also would assist the regional panels in developing norms and guidelines.

Dr. Fisher stated that, with the help of Dr. Miller and Royal Cooper, the Health Care Foundation of Missouri was launched and that Dr. Miller had a series of slides which he would show and discuss.

Mr. Cooper explained that Dr. Froelich's committee, Dr. Miller and staff had spent many hours and days in serious study and debate of peer review and the foundation concept, its relationship to state and county physicians' societies and its relationship to government medical care programs. Also, extensive study of the attitudes and requirements of the Blues, of the involved governmental agencies and of the facilities which may be available to assist in the administration of this program were made.

Mr. Cooper stated that Articles of Incorporation for the Health Care Foundation of Missouri were filed and approved by the State of Missouri on August 31, 1970. The two incorporators of the Foundation are Dr. Fisher as President of MSMA and Dr. Claus Rohweder, Kirksville, as President of MAOPS. The first Board of Directors, 21

in number, include the 15 officers and councilors of MSMA and the six designated officers of MAOPS. He said it is logical that the two societies control the statewide foundation. However, in the future, possibly the Blues, representatives of the Health Insurance Council, state and federal government representatives, labor, management and consumers will be included in an advisory, ex officio capacity.

It is hoped that during the year guidelines or parameters will be established, based upon actual charge experience in the area and a consensus of medical judgment as to what constitutes necessary care of good quality. These guidelines should include the following:

1. Usual and customary fees for physicians' services by diagnosis.
2. Appropriateness of hospital confinement by diagnosis.
3. Length of hospital confinement by hospital diagnosis.

In the basic mechanics of the program, the Blues, carriers, fiscal intermediaries and county medical societies would submit cases based on current guidelines to the Foundation central office. The State Policy Coordinating Committee, possibly working in twos and threes, would screen all incoming cases:

1. To resolve and return to the fiscal intermediary cases involving some technicality or missing information.
2. To oversee the types of cases coming through the Foundation.
3. To train staff and implement administrative procedures.

Cases would be assembled by district; additional information, if needed, requested from the physician or carrier. Chairman of the Regional Panel would be contacted, meeting date and place established, cases prepared and mailed to all members of Committee at least ten days before the meeting to enable them to study cases before the meeting. Staff attends meetings, acts as secretary to the Committee and forwards committee recommendations to the fiscal intermediary. If a physician is dissatisfied with a decision of the Regional conglomerate committee, he may appeal it to the State Specialty Society Committee. If a case does not involve possible disciplinary action, the physician could possibly appeal for a hearing with the State Policy Coordinating Committee.

Dr. Miller explained that the effectiveness of the Peer Review mechanism depends upon total support of the medical community. Success depends upon devotion of time and effort by dedicated men throughout the spectrum of medicine and osteopathy to Peer Review panels. He said that we anticipate that physicians participating in the program will be paid on a "per diem" basis in addition to travel expense when applicable.

He said that we feel that in the broad spectrum or conglomerate panel, educational opportunities are better for both public and professionals. Through specialty back-up panels, problems which could not be resolved by individual geographic review panels will be evaluated fairly on the basis of quality. We think unquestionably that this Peer Review mechanism will be of great help to patients throughout the state. It will be the source of improved professionalism within our own association, and

it will be of great economic value to intermediaries for medical care including Blue Shield Plans in St. Louis and Kansas City, Health Insurance Council and State Division of Welfare.

Dr. Miller presented a series of slides with special comments. He stated that Peer Review has been an established mechanism for many years. Primary emphasis has been placed on length of stay as related to cost. Secondary emphasis has been placed on quality and continuing education. Missouri's program specifically stresses values of comprehensive Peer Review in delivery of medical services. Criteria are in developmental stages to achieve major objectives of (1) Review of Equality (Utilization), (2) Review of Cost, (3) Review of Quality and (4) Provision for Education.

The Peer Review mechanism will encompass medical care delivery in the following areas. Emphasis will be on medical, health-related influences as well as socio-economic influences on patient recovery. They are (1) Physicians' Offices, (2) Neighborhood Health Centers, (3) Hospitals, (4) Extended Care Facilities and (5) Nursing Homes.

Retrospective evaluation is to be carried out as a continuing element of the program by use of patient, physician, provider and cost of illness profiles. Emphasis will be placed on "patterns of delivery" of medical care including both over- and under-utilization.

The not-for-profit Foundation approach is to be followed for implementation of the program. Health Care Foundation of Missouri is a corporation communicating with the total community for purposes of providing resources for cost for peer review, cost for physician education, cost for public education and negotiation and development of a total program for delivery of health services.

Emphasis of a statewide program in Peer Review identifying pervasive weaknesses becomes the focus for general educational effort. Responsibility for review must be effectively linked with the highest authorities in any program, so that information concerning behaviors in the system can lead to appropriate structural and procedural modifications in the programs as a whole.

Dr. Miller explained that financing of the Foundation is progressing rapidly. Both the Kansas City and St. Louis Blue Shield Plans and the State Division of Welfare will participate in financing this organization. It is anticipated that the health insurance industry will participate financially in the Foundation at a later date.

Dr. Miller stated that if medicine is to do an effective job in peer review, it also must participate in the cost. He suggested an initial, token appropriation of perhaps \$5,000 from MSMA and \$2,000 from MAOPS.

Discussion followed regarding staffing of the Health Care Foundation. It was decided that Mr. Cooper would be in charge at the beginning and would recruit additional help as needed.

Dr. Fisher suggested that physicians could take care of some patients in a more satisfactory manner if health insurance policies provided for treatment on an outpatient basis. He urged the Councilors to discuss this idea with their patients and health insurance agents.

Dr. Fisher moved that the Council go on record as appropriating \$5,000 when needed with the provision that the evidence of this action be submitted to the Osteopathic Association. After further discussion, on motion, duly seconded, it was agreed to table Dr. Fisher's motion for the time being.

On motion, duly seconded, it was agreed to approve the interim report of the State Policy Coordinating Committee for Peer Review. The motion carried.

On motion, duly seconded, the Council approved the Health Care Foundation of Missouri. The motion carried.

The Chairman entertained a motion to untangle Dr. Fisher's previous motion. It was duly seconded and carried.

After further discussion, on motion of Dr. Fisher, duly seconded, it was agreed that the Council go on record as appropriating \$5,000 for the Health Care Foundation of Missouri with the provision that the evidence of this action be submitted to the Osteopathic Association.

On behalf of everyone present, the Chairman thanked the President-Elect for his wonderful hospitality the previous evening.—Referred to Resolutions Committee.]

BUDGET COMMITTEE

The Chairman appointed the following Budget Committee for 1971: Drs. Fisher, Miller, Stricker, Cope and Gunn with Dr. Franklin as Chairman. He indicated that a meeting of this Committee will be held on Friday, Dec. 11, 1970 prior to the December 12-13 Council Meeting.

COMMITTEE ON ARRANGEMENTS

The Chairman then appointed the following physicians to the Committee on Arrangements for the 1971 Annual Session: Dr. Robert Mayer, Chairman; Hansbrough; and Gunn.

AMA DELEGATES' REPORT

Dr. Peterson reported that all the Delegates and Alternate Delegates were present at the 119th Annual Convention of the AMA held in Chicago on June 21-25, 1970 and all worked hard, including the officers and staff members attending. Dr. Neilson served as Chairman of a Reference Committee and Dr. Benoit served as a member of the committee which held a public forum for consumers. Dr. Wesley W. Hall was elected President-Elect, Dr. H. Thomas McGuire was elected Vice-President and Drs. Russell B. Roth and J. Frank Walker were reelected to their positions as Speaker and Vice-Speaker of the House respectively.

Dr. Peterson stated that none of the resolutions submitted by the Missouri Delegation were turned down, but were referred to proper places for further consideration. He further stated that there is going to be a great expansion of activities of AMA as far as public relations is concerned. He then gave a brief rundown regarding some of the actions of the AMA House, indicating that these have been published and he felt everyone was aware of them.

On motion of Dr. McAlhany, duly seconded, the AMA Delegates' Report was approved. The motion carried.

ATHLETIC INJURIES

■ Dr. Miller introduced Dr. Donald M. Spencer, an orthopedic surgeon from Kansas City, who discussed the matter of prevention and treatment of athletic injuries.

Dr. Spencer indicated that he has noted in his practice and association with coaches at high schools, colleges and little league levels that there is a definite need for more medical involvement in athletic programs, not necessarily in the treatment of injuries, but in the prevention of them. He further indicated that there are

many products on the market aimed at athletes and athletic programs and most coaches are at a loss as to what is necessary for a safe athletic program. He stated that he felt it would be good for the medical community and the community as a whole if the physicians could develop a committee that would establish such guidelines and standards. Dr. Spencer indicated that there are no standards on when an injured athlete should return to play after an injury; what the medical kit on the sideline should contain; do we have a drug problem among athletes; etc. He concluded by stating that this is a service physicians could offer our communities and one which is definitely needed.

Dr. Cope indicated that he felt any standards to be established should include all children involved in physical education and not only those in competitive sports.

Dr. Spencer said that there is some literature available on athletic injuries, but most of it is aimed at treatment of these injuries.

Dr. Gunn stated that the AMA has several pamphlets on various phases of such programs.

After further discussion, Dr. Gunn referred Dr. Spencer's report to the Commission on Public Affairs with the recommendation that an Ad Hoc Committee be formed with Dr. Spencer as a member for further report back to the Council.—Referred to Miscellaneous Affairs Committee.]

UNIVERSITY OF MISSOURI MEDICAL CENTER

■ Dr. William Mayer reported on the fiscal problem of the University of Missouri Medical Center at Columbia and some proposed solutions to the problem. He stated that, at the present time, there is a deficiency in the budget of approximately \$670,000 which is totally out of the hospital portion of the budget. He indicated that only 20% of their patients are total pay patients. All patients are on a referral basis with the exception of some in OB, continuing care in pediatrics and family practice. Dr. Mayer mentioned several possible solutions to this fiscal problem:

1. Approach the physicians of the state, asking them to send more of their paying patients and not only those unable to pay.
2. Take the patients who are referred and make the decision to accept them on the basis of their ability to pay.
3. To change from a referral basis only, by accepting patients directly without referral.

Dr. Mayer stated that the largest percentage of patients who are part-pay patients are not covered under Medicare or Medicaid, but are medically indigent. He said that the concept seems to be that the University Hospital constitutes the indigent care hospital of the state.

Much discussion followed regarding this problem and possible solutions to it. It was stated that possibly doing away with the referral system might only bring in more indigent patients.

Dr. Mayer stated that if the University Hospital would accept only those patients who could pay, he felt that their patient care would go down below the level necessary for a teaching hospital. The possibility of a supplemental appropriations bill was suggested. It was suggested that if they went to only full pay patients, it might become difficult to go back to the Legislature for appropriations. Dr. Matthews suggested that they might go to



Newly-installed MSMA President Gerald L. Miller (right) presents to his predecessor, Joseph L. Fisher, a plaque expressing the Association's appreciation for his year of service and leadership as President. Doctor Fisher will continue as a member of the Council for another year.

full pay or nearly full pay patients on a temporary basis to get the hospital over the crises.

It was stated that the quality of teaching patient care might drop if the third solution were put into effect.

Inquiry was made as to whether the financial problem could be solved if 30% of the hospital's patients were full pay. Dr. Cope indicated that possibly Boone County physicians having clinical appointments to the University might, on a temporary basis, send some of their private patients to the University Hospital in order to obtain the 30% full pay patient load.

Dr. Mayer then reiterated briefly the Medical Center's relationship with the Division of Welfare and the Medicaid Program, particularly as it relates to payment of supervisory physicians. He indicated that according to the Division of Welfare, any service claimed must have been personally provided by the physician signing the claim form. There is no provision for payment of supervisory physicians. He stated that most other states pay for services which are rendered under direct, personal supervision. Dr. Mayer reported that he is still meeting and corresponding with Mr. Carter to try to resolve this problem.

After further discussion, the Chairman indicated that he felt Dr. Mayer had received the thinking of the Council regarding his problems and on motion of Dr. Bradshaw, duly seconded, Dr. Mayer's report was accepted. The motion carried.—Referred to Medical Education Committee.]

REPORT OF COMMITTEE ON MEDICAL ECONOMICS, THIRD PARTY MEDICINE AND GOVERNMENTAL RELATIONS

■ Dr. Herbert Wiegand, Chairman of the Commission on Medical Economics, Third Party Medicine and Governmental Relations, gave the following report regarding the meeting of the Commission held on July 19, 1970 in Jefferson City:

Dr. Wiegand stated that his Commission discussed the resolutions adopted by the MSMA House of Delegates concerning "Improper Decisions Against Part A Medicare Patients by St. Louis Blue Cross," "Utilization Review Committees" and "Extended Care Claim Rejections." It was noted that a medical director has been appointed by St. Louis Blue Cross to review claims. The Commission felt that the problems outlined were with all fiscal intermediaries handling Part A of the Medicare Law.

The following Ad Hoc Committee was appointed to meet with the carriers and report back to the Commission: Louis P. Hetlage, M.D., Troy, Chairman; Virgil Loeb, Jr., M.D., St. Louis; Victor B. Buhler M.D., Kansas City; Stanley S. Peterson, M.D., Springfield; and Joseph S. Cope, M.D., Lexington.

Dr. Wiegand reported that the resolution concerning "HEW's Nullification of Utilization Review Committees" was discussed and it was reported that this resolution was presented to the AMA House of Delegates in June and no further action was needed.

Dr. Wiegand indicated that Dr. Peterson discussed the intent of the resolution adopted concerning "Negotiation of Professional Fees." The Commission recommended that the Chairman of the MSMA Council pursue and implement the, "Resolved, that the MSMA be directed to set up the mechanism for negotiation of not only professional fees, but also the rules, regulations and procedures that establish the conditions under which the physicians render their services," as soon as possible. It was also reported that this resolution was introduced into the AMA House of Delegates and was referred to the Board of Trustees.

Dr. Wiegand reported that discussion was held regarding three related resolutions concerning the sponsorship of Missouri Medical Service (St. Louis Blue Shield) and the two Missouri Shield groups were discussed generally. An Ad Hoc Committee was appointed by the Chairman of the Commission to consider the relative merits and problems inherent in the two Blue Shield plans. Another resolution "that the practicing physicians of Missouri through MSMA direct its sponsored organization, Missouri Medical Services, Inc. to provide total health care insurance" was also included for study by this Ad Hoc Committee. Dr. Maple of Springfield was appointed Chairman of this Ad Hoc Committee. Committee members are: Drs. W. J. Ferguson, Sikeston; Roy Pearce, Nevada; Blaine Hibbard, Kansas City; James Haddock, St. Louis; and E. E. Wadlow, St. Joseph. Dr. Wiegand stated that this Ad Hoc Committee met on September 30 and would report to the Commission.

Dr. Wiegand stated that his Commission recommended that a letter from the President of the St. Louis Medical Society requesting that specialty groups survey members and update fee schedules be returned to the MSMA Council with the recommendation that it be referred to the Commission on Interspecialty Medicine.

Dr. Fisher indicated that, in his travels over the state, he has had inquiries from young physicians regarding fee schedules.

On motion, duly seconded, it was agreed that the updating of fee schedules be referred to the Commission on Interspecialty Medicine.

Dr. Wiegand reported that at the Commission meeting, Dr. Froelich explained the work of his committee regarding a peer review mechanism for Missouri physicians and the possibility of chartering a foundation to

implement the program. He stated that Dr. Froelich also discussed the possibility of establishing a pilot program for a rural Missouri county foundation that would deliver prepaid medical care for Medicaid patients under a contract with the Division of Welfare. The Commission also discussed recent physicians fee cuts and limitations imposed under the Medicaid Program.

The motion was made, seconded and carried that the report of the Commission on Medical Economics, Third Party Medicine and Governmental Relations be approved.

HEALTH CARE FOUNDATION

Dr. Miller indicated that he felt the Council should take some action regarding the Foundation and its membership, indicating that many things need to be done and funds cannot be spent until the organizational structure is completed. He stated that he felt it absolutely essential that this Foundation and peer review concept be sold to all physicians and that the majority be cooperating members.

On motion of Dr. Miller, duly seconded, it was resolved that members of the Missouri State Medical Association should be active, participating members of the Health Care Foundation of Missouri. The motion carried.

Dr. Miller stated that similar action will be taken by the Osteopathic Association. He further stated that the proposed Constitution and Bylaws of the Health Care Foundation will be circularized to the Board of Directors.

Dr. Gunn reported that a meeting of the Board of Directors of the Health Care Foundation will be called for the purposes of electing officers and adopting Bylaws. It was suggested that an evening meeting be held in Columbia as soon as possible.

The Chairman indicated to the Deans of the Medical Schools that at future Council Meetings there will be an agenda item entitled "Deans' Report," which will give them an opportunity to bring matters of significant importance to the attention of the MSMA Council.—Referred to Resolutions Committee.]

AMA CLINICAL SESSION

Dr. Peterson reminded the Council to send any resolutions which they would like to be submitted to the AMA at the Clinical Session to be held in Boston, November 29-December 2.

NEXT MEETING

The next Council Meeting will be held on December 12-13, 1970 at the Ramada Inn in Jefferson City, with a meeting of the Budget Committee to be held at 4 PM on December 11.

The meeting adjourned at 12:15 PM.

Meeting of Dec. 12-13, 1970

Walter T. Gunn, M.D., St. Louis, Chairman, called the meeting to order. Those present were Drs. Gunn; John N. Martin, St. Joseph; Lysle M. Bach, Hannibal; Robert A. Mayer, Clayton; James C. Cope, Columbia; William D. Bradshaw, Clinton; R. A. Chandler, Kansas City; Howard J. McAlhany, Springfield; E. A. Stricker, St. James; E. T. Hansbrough, Poplar Bluff; Joseph L. Fisher, St. Joseph; Gerald L. Miller, Kansas City; John I. Matthews, Jefferson City; Max S. Franklin, St. Louis; Doyle C. McCraw, Bolivar; J. Loren Washburn, Versailles; Hector W. Benoit, Jr., Kansas City; Arthur W. Neilson, St. Louis; William D. Mayer and William C. Allen, Colum-

bia; Robert H. Felix, George E. Thoma, and M. Kenton King, St. Louis; Richardson K. Noback, Kansas City; Henry V. Guhleman, Jr., Jefferson City; John McDonnell, Kansas City; Charles Worley, Sweet Springs; Paul R. Young, Kansas City; Messrs. Humphrey and Schroeder of Eggert-Carroll-Schroeder Agency, Inc.; John W. Noble, Kennett; Hollister Smith, St. Louis; Edgar Mothershead, Clayton; Gary L. Schnedler, Springfield; Allen D. Smith, Kansas City; Edward M. Hirsch, St. Joseph; Ray McIntyre, Tom P. Fox, Bob Carroll and Royal O. Cooper, Staff.

The Chairman requested approval of the minutes of the Council meeting on Oct. 3-4, 1970, calling attention to a correction on page 4, paragraph 7, under the Report of the Committee on Planning, regarding the "mandatory emergency physician call roster in hospitals" which was referred to the Commission on Medical Education and Health Manpower for further study, recommendation and activation. Also, paragraph 8, page 4 and continuing on page 5, regarding "the need for active speakers bureaus in all sections of the state" which should have been referred to the Commission on Public Affairs instead of the Commission on Medical Education and Health Manpower, as reported in paragraph 2 on page 5 of the mimeographed copies.

On motion, duly seconded, the minutes of the October 3, 4, meeting were approved as amended.

REPORT OF THE EXECUTIVE SECRETARY

Mr. McIntyre stated that an official request had been received from the Woman's Auxiliary to MSMA for \$600 to assist with their 1971 annual meeting expenses. On motion of Dr. Stricker, duly seconded, the official request of the Woman's Auxiliary in the amount of \$600 was approved.

It also was reported that a request had been received from SAMA for continuation of our sustaining membership in that organization in the amount of \$100. On motion, duly seconded, the Council approved this expenditure. Mr. McIntyre mentioned that SAMA is having its annual meeting on May 4-8, 1971 in St. Louis and their Woman's Auxiliary is to meet at the same time. He added that the MSMA Woman's Auxiliary has received a request for funds to help the SAMA Auxiliary with their meeting expenses.

Mr. McIntyre reported that he had received a request which had been sent to Dr. Hansbrough, Councilor of the Tenth District, from the Mineral Area Medical Society seeking to add Bollinger County to that hyphenated county society. It was pointed out that the Council has the authority to grant such hyphenation. After discussion, on motion of Dr. Hansbrough, duly seconded, it was agreed to add Bollinger County to the Mineral Area Medical Society.

■ The Executive Secretary reported that a number of physicians have requested that the fee schedules developed by the various specialty organizations for use by the Division of Welfare, through the MSMA Council some three years ago as a cut-off figure in processing Medicaid claims, be revised and brought up to date to conform with rising costs. He stated that the Commission on Interspecialty Medicine will meet on January 17 and will discuss this matter. Dr. Fisher proposed that the Council consider whether or not these fee schedules should be released through the Commission to the respective specialty groups to assist each specialty group in making up a

new cut-off fee schedule, but that no publicity or circulation of these lists be given without Council consent. Mr. McIntyre stated that Chairman Gulick would like to bring this matter before the Interspecialty Commission to see if they recommend revising the schedules and if so, approval of the Council is requested.

After considerable discussion, on motion of Dr. Mayer, it was agreed that the Council authorize the staff to release the fee schedules to the members of the Commission on Interspecialty Medicine on a restructuring basis and amended by Dr. Bradshaw with the request that the fee schedule information be made available to the Board of Trustees of the newly organized Health Care Foundation of Missouri. The motion was duly seconded and carried as amended.

HEALTH CARE FOUNDATION OF MISSOURI

The administrative members of the Health Care Foundation of Missouri completed their election of members to the Board of Directors. The following were elected for the terms indicated: Dr. Benoit had previously been elected to a three-year term on the Board and a one-year term as Chairman; Dr. Gerald Miller—three-year term; Drs. Rae Froelich and Joseph Fisher—two-year terms; and Drs. Charles Gulick and John I. Matthews—one-year terms. Mr. Cooper stated that the first meeting of the Board of Directors will be on Saturday, Dec. 19, 1970.—Referred to Resolutions Committee.]

REPORT OF THE TREASURER

Dr. Franklin gave a brief report on the financial standing of the Association as of Nov. 30, 1970, copies of which were distributed to the Council and officers. He stated that the Association is in good financial condition and would finish the year in the black. On motion, duly seconded, the Treasurer's report was approved.

REPORT OF COMMISSION ON PUBLIC AFFAIRS

■ Dr. Guhleman, Chairman of the Commission on Public Affairs, called attention to a copy of the program for the 1971 County Medical Society Officers Conference which is scheduled for Saturday afternoon and Sunday morning, Jan. 30-31, 1971 at the Ramada Inn, Jefferson City. He stated that the program for the meeting was formulated by a committee headed by Dr. Richard Bowles of Liberty, who was aided by the staff of MSMA.

Dr. Guhleman also called attention to a proposed orientation program for new members which is tentatively scheduled for Thursday morning, April 15, 1971 in St. Louis, just prior to the opening of the House of Delegates at MSMA 113th Annual Meeting. He stated that the program was prepared at the direction of the Council by a group chaired by Dr. Troy Morgan of Albany. He said that if the Council decides to have an orientation program, the Commission on Public Affairs will accept the responsibility for securing speakers for the program and will make any changes the Council suggests.

Dr. Guhleman reported that a special Ad Hoc Committee had been named to work in the "Medical Aspects of Sports" field. Dr. Donald Spencer of Kansas City was named Chairman of this Ad Hoc Committee. Members of the Committee are Dr. Hansbrough, Poplar Bluff; Dr. Edwin C. Ernst, Jr., St. Louis; Dr. H. Peter Ekern, Mexico; and Dr. David W. Brown, Springfield.

He also reported that the Commission was assigned to

study the need for an Association Speakers Bureau and that he had requested the MSMA staff to secure information from other states which have such programs. This will be brought before the full Commission before any action is taken.

Dr. Guhleman expressed his appreciation to the MSMA staff and especially Bob Carroll for his help on these projects.

Dr. Mayer stated that he would like to endorse the orientation program as proposed and complimented the group for the fine program.

On motion, duly seconded, the report of the Commission on Public Affairs was accepted.—*Referred to Miscellaneous Affairs Committee.*]

IRS PROPOSED ASSESSMENT

Mr. Noble reported on the assessment levied on the MSMA regarding unrelated income from Journal advertising and stated that a protest has been filed with the IRS and a district conference has been requested on the matter. He stated that he thinks the protest is in good form and all of the questions which he considered pertinent to the termination of the matter had been raised and possibly within the next 30 to 60 days, we will have a conference in which all of these matters can be discussed.

REPORT OF THE BUDGET COMMITTEE

Dr. Franklin reported that the Budget Committee met on Friday, December 11 at 4 PM with all members of the Committee present. He said the Association is now spending additional funds for legal and auditor expenses in the IRS matter. He reported that the Budget Committee recommends unanimously that the Planning Committee be charged with making a progressive study of the fiscal needs of the Association and make recommendations for mechanism that will support these fiscal needs. On motion of Dr. Stricker, duly seconded, this was approved.

The Budget Committee also recommended that the Planning Committee study the MSMA and its responsibility to its members in regard to continuing medical education, particularly the financing of such endeavors. On motion, duly seconded, this was approved.

MISSOURI STATE MEDICAL FOUNDATION

Dr. Franklin reported the Board of Trustees of the Missouri State Medical Foundation (Medical Student Loan Program) had requested the Council to approve renewing the \$10.00 per active member and \$5.00 per junior member assessment for the next three years. He stated the Foundation has money to take care of the year 1971, but the House of Delegates will have to determine whether or not the assessment will be renewed for 1972, 1973 and 1974. After discussion, on motion, duly seconded, the Council agreed to submit a recommendation to the House of Delegates that the assessment be renewed for the next three years, 1972, 1973 and 1974.

Mr. McIntyre reported that the Headquarters Office is badly in need of a new addressograph and presented figures on the cost of this new equipment which would amount to approximately \$2,649. It was pointed out that if it were purchased before December 21, an estimated 6% price raise would be saved. On motion of Dr. Franklin, seconded by Dr. Mayer, the Council approved the purchase of the new equipment.

MSMA BUDGET FOR 1971

The following budget for the year 1971 was presented for Council approval:

Salaries	\$118,500.00
Furniture & Fixtures	1,000.00
Office Rent & Lights	7,700.00
General Expense	2,600.00
Office Supplies	3,500.00
MSMF Assessment	36,065.00
Postage	3,500.00
MSMF Expense	3,300.00
Journal Expense	40,000.00
Equipment Rentals & Repairs	2,400.00
Telephone & Telegraph	7,600.00
Pension Expense	21,097.00
Legal & Professional	10,000.00
Taxes-Payroll	3,800.00
Travel Expenses	8,600.00
Meetings & Committee Expense	33,600.00
Annual Session	17,000.00
Re-investment of Reserve Income	5,000.00
Total	\$325,262.00

After discussion and following a short executive session, on motion of Dr. Franklin, duly seconded, the Budget Committee Report was approved as a whole with the above budget for 1971 being adopted.

COUNCILOR DISTRICT REPORTS

Dr. Martin reported on a First Councilor District meeting held in St. Joseph with some 80 persons in attendance. Dr. Fisher and Dr. Noback were guest speakers.

He also reported on some difficulty regarding physician relationship with school principals and coaches in regard to writing excuses for children who should not participate in physical education activities. It was pointed out that the state of Missouri requires that a child cannot graduate from high school without a specified number of quarters of physical education. After further discussion, it was decided that this problem be referred to the Commission on Public Affairs.

Dr. Martin also requested information regarding a breakdown of the number of licensed M.D.'s in the state and the number belonging to the MSMA and the AMA. It was pointed out that such a list is not available at this time. He also requested information regarding bills to be introduced in the coming session of the Legislature which are of special interest to the medical profession, so that proper contacts could be made on the local level. It was pointed out that the MSMA staff would do all in its power to get this information to key personnel on the local level as soon as possible.

Dr. Bach gave no formal report for the Second Councilor District.

Dr. Gunn, Third District, reported that the Annual Meeting and Installation of New Officers of the St. Louis Medical Society will be held on Jan. 5, 1971. He also reported that they had conducted a survey of their membership on long range planning and had received a number of good suggestions on how to improve their society meetings.

Dr. Mayer reported on the Fourth Councilor District meeting which was held on November 20 at Stouffer's Inn in St. Louis with an attendance of 140 to 150 persons. Dr. Egeberg of HEW and Dr. Fisher were the guest speakers. Representatives from all of the Fourth Councilor District societies were present, as well as rep-

representatives from Blue Shield and various hospitals in the area. Dr. Mayer announced that St. Louis County Medical Society will hold its annual Installation Dinner on Jan. 22, 1971.

Dr. Mayer then presented a resolution, which was passed by the St. Louis County Medical Society Council, proposing elimination of junior dues and assessments of the Missouri State Medical Association. It was pointed out that this would require a change in the MSMA By-laws and would have to be passed by the House of Delegates. It was suggested that this be presented in the usual manner to the next session of the House of Delegates in April, 1971.

Dr. Cope, Fifth District, reported that he had spoken at a recent meeting of pre-med students and had spent a very delightful morning. He also mentioned a project in connection with the Boone County Medical Society and the Welcome Wagon group who put out a booklet which gives information on how to find a physician, how to get emergency care, ambulance, etc. He said the Chamber of Commerce agreed to take calls and help in this respect.

Dr. Bradshaw reported that a Sixth Councilor District meeting will be held on Jan. 13, 1971 at Warrensburg and invited all to attend.

■ Dr. Chandler, Seventh District, reported that Blue Cross and Blue Shield plans in Kansas City and St. Louis are not under the supervision of the State Insurance Department, since they are public service institutions, and not insurance, and should not be subjected to a proposed state premium tax, although some state supervision is logical. He also reported that recently a hearing was held before the State Director of Insurance on this issue and the Blues were represented by their respective legal counsels, but no report of the outcome has been released to date. Dr. Miller reported that the Kansas City plans had requested reports from other states which are under State Insurance Commissioners to find out what is going on and this information should be available in about two weeks.

Dr. Miller supported Dr. Chandler in his remarks concerning the Blues and the State Insurance Department. After further discussion, Dr. Gunn referred this problem to the Legislative Committee for study and suggested that representatives of the Blue Plans appear before the Committee.

Dr. Chandler further reported that under the Uniform Anatomical Gift Act, Jackson County has come up with a card that can be carried in one's pocket and is legal. Copies of the card were distributed for information. It was suggested that this could be done on a county society level and cards should be made available in all doctors' offices in order to secure donors.—Referred to Miscellaneous Affairs Committee.]

Dr. McAlhany, Eighth District, reported that Greene County Medical Society had sponsored a Health Careers Program at the same time the Annual State Teachers was meeting. He also reported on their Third Annual Orientation program which was held recently.

Dr. Stricker, Ninth District, reported that the county societies in his district are meeting regularly with good programs.

Dr. Hansbrough, Tenth District, stated he had attended the meeting of the Southeast Missouri Cancer Conference in Cape Girardeau which was an excellent meeting, and that plans are to have the meeting in Poplar Bluff next year.

REPORT OF THE PRESIDENT

Dr. Fisher thanked Dr. Mayer for the hospitality extended to Mrs. Fisher and him when they attended the Fourth Councilor District meeting in St. Louis and recommended that the Councilor District meetings should be continued next year. He also stated that he had attended the Grand River Christmas Party on December 10, which was well attended, as usual.

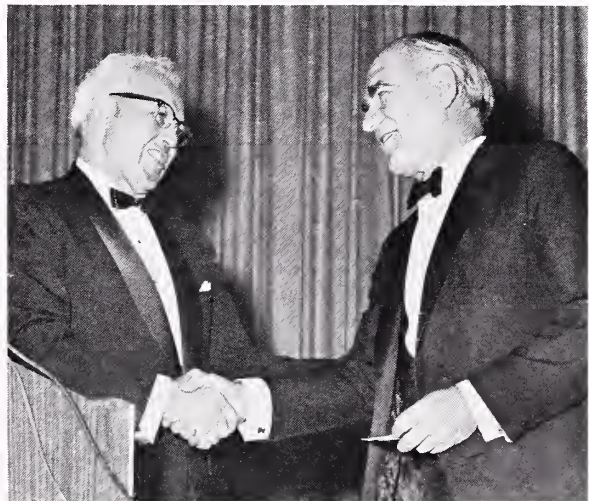
■ Dr. Fisher said that there was one item that had been discussed by the Council several times regarding interns and residents serving within our state. He said some effort should be made to organize this group into a Society and a mechanism should be provided whereby they can elect delegates to the Annual Session of MSMA and take part in the House of Delegates and its deliberations. In this manner, we would have better communications between these physicians, so they would be made aware of the needs in our state and perhaps be induced to remain in practice in Missouri.

Dr. Fisher stated that the MSMA should continue to work toward this goal in the future since the younger element in the medical profession today will be the leaders later on. They need to take a more active position and play a more important role in organized medicine.—Referred to Constitution and By-Laws Committee.]

President Fisher also mentioned that legislation is needed in Missouri to protect those serving on Review Committees. He stated that with Peer Review coming and the Health Care Foundation becoming functional, we will run into problems and should be in position to take care of them.

Dr. Fisher stated that the MSMA should promote a suitable means for mediating hospital-physician disputes.

He called attention to a communication received from Dr. Jordan Kelling regarding the Missouri Chapter of the American Association of Medical Assistants, stating they would like to avail themselves of the space in MISSOURI MEDICINE which had been offered to them some time ago. Dr. Fisher asked the Council to instruct the staff



The Missouri State Medical Association was honored to have Dr. Russell B. Roth, Speaker of the AMA House of Delegates, as a guest at the Annual Session and featured speaker at the President's Banquet. MSMA President Fisher expresses this thought as he welcomes Doctor Roth.

that when communications are received from this group and after careful screening, the material be accepted for publication in *MISSOURI MEDICINE*. On motion, duly seconded, it was agreed to accept this material as directed by the Council.

REPORT OF MEDICAL SCHOOL DEANS

■ Dr. William Mayer said that he would like to give a follow-up of the report made at the previous Council Meeting regarding the budgetary problems of the University of Missouri-Columbia Medical Center. He stated that the Board of Curators approved his recommendations of the manner in which a cut of \$2.2 million will be made out of the Medical Center budget. A summary of actions proposed in the resolution of the budget deficit was distributed to the Council. Dr. Mayer indicated that the Division of Welfare is now paying the University on an actual cost basis for Medicaid patients. He further stated that in order to increase income, there will be a change in admission of patients on the basis of ability to pay. Admission will no longer be made simply on the basis of whether the care is a component of the educational program, but an added fiscal consideration also will have to be made. He asked that the physicians try to be helpful in this matter.

Dr. Mayer stated that he would appreciate physicians' support on the proposed Outpatient Clinic-School of Nursing Building at the University of Missouri-Columbia Medical Center. Material was distributed regarding this proposed building project.

Dr. Robert Felix expressed the appreciation of the St. Louis University Medical School to the officers and staff of the St. Louis City and St. Louis County Medical Societies for their support and assistance to the Medical School. He indicated that the Medical School has received a grant and the construction program is underway. Dr. Felix stated that there is much pressure for increased enrollment in the medical schools. He indicated that they are trying to teach the students something about community responsibility and some are now looking into the problem of lead poisoning in the ghetto areas.

He reported that they have been given an unqualified accreditation for the next seven years, which is the limit on accreditation.

He stated that he has appointed a Committee on the Role of the Basic Sciences to study what knowledge the students bring with them to Medical School, etc.

Dr. Noback, dean of the University of Missouri-Kansas City Medical School, stated that the University administration has been given to understand that if additional taxes are forthcoming, the University can expect to have increased appropriations and will be able to get the new school started in Kansas City. He indicated that he has received a tremendous amount of support and understanding from the physicians and is hopeful that this new school can help to alleviate the doctor shortage problems in the State.—Referred to Medical Education Committee.]

MAJOR HOSPITAL-NURSE EXPENSE PROGRAM

Mr. Arthur Humphrey of Eggert-Carroll-Schroeder Agency, Inc. stated that about a year ago the Council approved their Guaranteed Renewable Plan which resulted in a number of new enrollments in the program. Mr. Humphrey demonstrated that during the past three years claims paid or in the process of payment have exceeded

premiums received. He presented to the Council a revised rate schedule for the Association's Major Hospital-Nurse Expense Program for members of MSMA and asked for the Council's approval. He further stated that as the performance of this program during the past several years has demonstrated, it would be in the interest of insured members participating in this program, to establish hereafter a practice of review at least every two years. Mr. Humphrey stated that he was seeking approval of the revised premium schedule and that they desire to put it into effect April 1, 1971. After brief discussion, it was moved and seconded that the revised premium rate schedule be approved to become effective April 1, 1971. Motion carried.

RECENT ACTIONS OF THE STATE BOARD OF HEALTH

■ Dr. Bradshaw discussed some recent actions of the State Board of Health. He reported that Dr. Herbert Domke has been named the Acting Director of the Missouri Division of Health effective Dec. 30, 1970.

Dr. Bradshaw said that the Board of Health has proposed legislation to be brought before the Legislature regarding treatment of minors without parental consent and stated that the Board was seeking the reaction of the Council in regard to this proposed legislation. He stated that this deals with treatment of minors with VD, care of drug abusers, etc. Dr. Bradshaw stated that it is a broader scope of legislation than would appear on the surface. He indicated that no minimum age is stated in the proposed legislation.

After brief discussion, the Chairman referred this portion of Dr. Bradshaw's report to the Legislative Committee for study and recommendation back to the State Board of Health. Motion carried.

Dr. Bradshaw indicated that the Governor's Advisory Council on Comprehensive Health Planning, of which Dr. Robert Kelley is a member, recommended the establishment of a state center for health statistics and further recommended that this matter be investigated by the State Board of Health. On November 20, at a meeting of the Board of Health, they charged their central office staff with (1) ways for funding the development of this center; (2) if funding can be obtained, presenting a plan for the initiation of this state center; (3) investigating the appointment of an Advisory Board for Health Statistics and to recommend people from various organizations and associations to serve on this Advisory Board. Dr. Bradshaw pointed out that the central office staff of the Division of Health could make recommendations to the Advisory Board, but the appointments would be made by the State Board of Health.

Dr. Bradshaw stated that he brought this matter before the Council for their information and, secondly, for recommendations that they wish to make regarding appointments to the Advisory Board to help set up the guidelines for the state center for health statistical accumulation.

The Chairman referred this portion of Dr. Bradshaw's report to the Commission on Public Affairs with a recommendation that they appoint an Ad Hoc Committee for this special project.—Referred to Miscellaneous Affairs Committee.]

■ Dr. Bradshaw then discussed the endorsement of the State Board of Health for private medical schools state financial assistance. He indicated that the Board endorsed the financial assistance to the private medical and

osteopathic schools of Missouri to stabilize present enrollment, to help provide support and incentive to increase the enrollment. He stated that he felt the endorsement given did not particularly have in mind any priorities, but simply recognizes need and with this need in mind endorsed the program.

Dr. Bradshaw then called on Dr. George Thoma, Assistant Vice President of St. Louis University, to further present the proposal of the private medical schools.

Dr. Thoma stated that their proposal was to try to stabilize the current source of physicians and to increase the enrollment. He further stated that private schools are in fiscal difficulties as are all other schools. The proposed bill, which will be introduced in January, indicates that the state will contract with the private medical schools for Missouri residents for their education at the rate of \$4,000 a year, in return for which the schools shall reduce their tuition to Missouri residents. The ultimate goal is to try to increase the medical school enrollment in the private schools by 100 students. Dr. Thoma indicated that they did not wish to be in competition with the University of Missouri or the new Medical School at Kansas City for state funds, but felt that if tax dollars are forthcoming, they would like to be able to go to the Legislature and say that organized medicine is behind their attempts to increase the health manpower source through the private sector of the state.

Discussion followed regarding tax dollars and priorities as far as medical education is concerned. It was pointed out that, perhaps, a proposal of this type to the Legislature should be accompanied by a suggested method for financing. It also was mentioned that perhaps a proposal such as this would open the door to every institution in the state that does not have a tax subsidy to approach the Legislature for financial support.

After further discussion, motion was made and seconded that the portion of Dr. Bradshaw's report regarding the private medical schools state contract proposal be referred to the Commission on Continuing Education and Health Manpower.

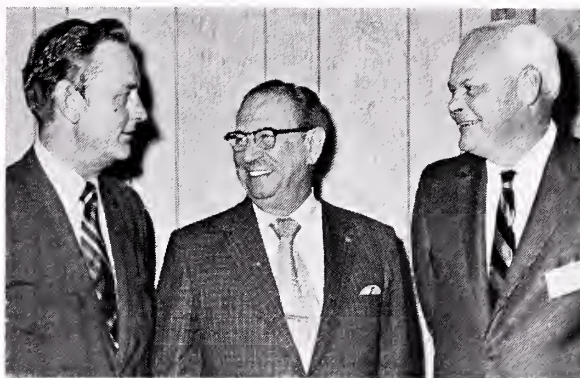
On motion by Dr. Fisher, duly seconded, Dr. Bradshaw's report was accepted with commendation.—*Referred to Medical Education Committee.*]

REPORT OF AMA DELEGATES

Dr. Benoit gave a rundown on the AMA Clinical Convention held in Boston November 29-December 2. He stated that the House approved the proposal to provide for House jurisdiction over dues. The Reference Committee that reviewed this particular matter will have a meeting and airing of the budget before the House convenes next summer.

The Board of Trustees will continue to try to develop a national professional liability insurance program. The House approved the Board report announcing withdrawal of CNA Insurance from negotiations with AMA. They also urged each state association to seek enactment of state legislation "to provide a reasonable degree of certainty in the law and objectivity in the judicial process through which malpractice claims are determined."

The American Hospital Association is studying a proposal for a system of health care corporations that would deliver comprehensive care by geographic regions throughout the country. The AMA House called for study of this proposal by the Board and for a report to be submitted to the membership and to state medical societies.



Newly-elected Treasurer Charles R. Gulick (*left*) discusses the Annual Session with retiring Treasurer Max S. Franklin, who was elected Councilor for the Third District, and Dr. Louis P. Hettlage, who was elected Councilor for the Fourth District.

Regarding Peer Review, the House reaffirmed its approval of peer review organization, the plan presented in AMA's Medcredit proposal. It also approved the action taken by the Board in opposition to the Professional Standards Review Organization proposal (Bennett Amendment). The Reference Committee considering peer review reported the following changes in the original amendment which became available during the convention: (1) Deletion of the requirement of federal ownership of files; (2) Deletion of the \$5,000 fine; (3) Elimination of national norms; (4) Elimination of the requirement for preadmission approval for elective procedures. Dr. Benoit stated that the Health Care Foundation approach on peer review, which Missouri has taken, should be acceptable.

Dr. Benoit indicated that discussion was held and actions taken regarding liability in blood transfusions; reaffirmation of the AMA's policy on abortion; retention of the present method of electing trustees to fill specific vacancies. Dr. Washburn stated that the House has gone on record as approving the new five-digit current procedural terminology and urged that it be used.

REPORT OF AD HOC COMMITTEE ON ENVIRONMENTAL HEALTH

■ Dr. Neilson reported that a Subcommittee on Air Pollution met on Nov. 23, 1970 at the St. Louis Medical Society with Dr. Neilson chairing the meeting.

He stated that Dr. Theodore Sterling has worked this summer on data on the athletic performance of school children as a measure of effects of air pollution. The Committee felt that it would be feasible to carry out a further investigation utilizing lung and upper respiratory patients and correlating the state of their condition with data from Air Pollution Control Centers. Questionnaires will be used in order that results can be computerized.

Dr. Neilson indicated that the Woman's Auxiliary to the MSMA has been in touch with the Committee on numerous occasions regarding their environmental program and has been in touch with the AMA Council on Environmental and Public Health which has helped them plan for their Environmental Health Project over 1970-1971. He reported that the Auxiliary had voted to expend \$200 of its own money and has asked the MSMA

for an additional \$350 to cover all other costs of their Environmental Health Package Program.

At this time, the Chairman called for a motion regarding the request for \$350. Motion was made and seconded that the MSMA approve the Auxiliary request for \$350 for its Environmental Health Program. Motion carried.

Dr. Neilson stated that he had been appointed to the ARCH Environmental Planning Board. This agency is under the Comprehensive Health Planning Act.

Dr. Neilson stated that a meeting with Governor Hearnes would be held on December 16 for formal presentation of the results and conclusions of the Governor's Conference on Environmental Affairs. The report is dedicated to the late Mayor Raymond Tucker of St. Louis, recently deceased.

Dr. Neilson said that at the recent AMA meeting, the Missouri Delegation began to actively campaign for Dr. Benoit for a place on the Council on Medical Service. He requested that the MSMA Council write to Dr. Howard of the AMA urging the Board of Trustees to submit Dr. Benoit's name in nomination for the Council on Medical Service to the AMA House of Delegates.

On motion of Dr. Matthews, seconded by Dr. McAlhany, it was agreed a letter would be sent to Dr. Howard.

Motion was made and seconded that the report of the Ad Hoc Committee on Environmental Health be approved. Motion carried.—Referred to Miscellaneous Affairs Committee.]

REPORT OF AD HOC COMMITTEE ON CONTINUING MEDICAL EDUCATION

■ Dr. Young, Chairman of the Ad Hoc Committee on Continuing Medical Education, reported that the Committee met on Nov. 22, 1970 to discuss several items which had been referred to this committee. He stated that he also attended a liaison committee meeting with the Osteopathic Association to discuss mutual problems. He said the Committee discussed the Hospital Emergency Physician Call Roster problem in detail and felt that solutions could be found only at the local level and should be studied jointly by each hospital medical staff and administrative officials. The Committee recommended contact with the AMA requesting literature available which is pertinent to this situation.

Dr. Young said that the Committee also discussed implementation of the SAMA Summer Job Program. He stated that the Committee on Continuing Medical Education should have some voice in the selection of hospitals and that the Council or Councilor in a particular area should review these hospitals to be sure the student will receive a gainful experience. He stated the Osteopathic Association had approved this program.

Dr. William Mayer of the University of Missouri stated that hospitals could not take medical students without the approval of their medical schools and that the medical students should be assigned to a physician instead of the hospital. Dr. Young stated that a given physician must be assigned to each of these students.

After further discussion, on motion of Dr. Miller, duly seconded, it was agreed to approve this portion of Dr. Young's report with the requirement that some type of communication between the students involved be made the responsibility of the Committee on Continuing Medical Education.

Dr. Young stated that he had attended a recent meeting on Continuing Medical Education in Chicago, which

was sponsored by the AMA. He said there was a discussion regarding compulsory continuing medical education in order to maintain membership in a state medical association and, also, a requirement of a minimum amount of education for licensure in the state. He stated that these matters are being considered in relationship to continuing medical education across the country. More and more states are going to the compulsory status including Oregon, Arizona and Pennsylvania, with California moving in that direction.

Dr. Young then called attention to a proposed two-phase approach to the development of effective continuing education of physicians in the state of Missouri. Phase I—To develop workshops through component districts and local societies which will result in training physicians to identify educational needs. He stated that time and money would be needed and administration under the Commission on Continuing Education and Health Manpower and MSMA staff, with preparation to begin in 1971.

Phase II—It was suggested (a) to use the Peer Review System to aid in identifying educational needs and compare local standards of care with statewide standards; (b) to centralize information gathered by Peer Review relating to quality of care; (c) to evaluate the effect of the educational programs; (d) to give teaching institutions objectives upon which they can develop effective educational programs. Administration is suggested in cooperation with the Health Care Foundation of Missouri, with funding through a number of suggested possibilities.

After further discussion, on motion of Dr. Miller, seconded by Dr. Franklin, the report of the Ad Hoc Committee on Continuing Medical Education was accepted as amended, with special commendation to Dr. Young and his Committee for their efforts.

REPORT OF AD HOC COMMITTEE ON HEALTH MANPOWER

Dr. Worley, Chairman of the Ad Hoc Committee on Health Manpower, reviewed the minutes of the meeting held on October 18 in Jefferson City. He stated that the Committee had studied and discussed in detail the resolution referred to this committee by the MSMA House of Delegates regarding increasing health manpower in rural areas and to encourage the development of new programs to provide large numbers of family physicians. He said discussion included recruitment of students for all medical, paramedical and health careers; students to be approached, ranging from the seventh grade through the 12th grade; and participants representing the medical schools to cover related curriculum at the premedical level. Mr. Don Butzer of the Missouri Hospital Association explained recruiting for all medical and health careers funded by the MRMP and administered by the Missouri Hospital Association. He stated that funding was approved for a three-year period with invitations for financial assistance from all related health organizations. If the program is successful, it is hoped that hospitals in Missouri and other interested organizations will provide the funds to continue the recruiting program.

Dr. Worley stated that the Committee recommends that the Council approve endorsement of the health career recruiting program of the Missouri Hospital Association urging (1) that all physicians publicize and support the program at their respective local county medical society level and (2) that they participate when invited to serve as a speaker when the program is scheduled at lo-

cal schools and hospitals and on related career day programs.

Dr. Worley stated that the Committee also studied the resolution referred to the committee by the House of Delegates regarding Diploma Nursing Education which states that the "MSMA take all appropriate steps to encourage recruitment, development and expansion of diploma nursing programs." The Committee recommends for Council approval (1) the need for nursing personnel at all levels is acute; (2) the need is not being met; (3) strong and effective action is necessary; and (4) support for all nursing education programs at every level.

After further discussion on motion of Dr. Matthews, duly seconded, the Council approved the report of the Ad Hoc Committee on Health Manpower.

PROPOSED PROGRAM FOR 1971 ANNUAL SESSION

Dr. McDonnell gave a brief report of the proposed program for the 1971 Annual Session and its progress to date. He stated the preliminary program was published in the December issue of MISSOURI MEDICINE. It was noted that several portions of the program were not finalized as yet, but work is progressing in that direction.

On motion, duly seconded, the report of the Program Committee was accepted.

AMA CONGRESS ON HEALTH MANPOWER

Dr. Noback gave a lengthy report on the meeting of the First Annual Congress on Health Manpower of the AMA which he attended in Chicago on Oct. 22-24, 1970 as a representative of MSMA and the new Kansas City Medical School. He stated that he had found the program to be extremely well organized, the participants interested and sincere and the work worthwhile. He stated that he had served as moderator for one of the discussion groups. He said there were several of the discussion speakers who had very good points and, at the close of the meeting on Saturday morning, there was a summarization of the program from 19 different discussion groups. Dr. Noback gave a summary of some of the points in the overall papers and the major points reviewed. He mentioned that the proceedings would be published and thought it would be of interest when available.

After further discussion, on motion, duly seconded, the Council accepted the report of Dr. Noback.—Referred to Medical Education Committee.]

REPORT ON LIAISON COMMITTEE OF MSMA, MAOPS AND BOARD OF HEALING ARTS

■ Dr. Fisher reported on the meeting of the Liaison Committee of MSMA, Missouri Osteopathic Association and the Missouri State Board of Registration for the Healing Arts, which was held on November 13.

He stated that the action of the MSMA House of Delegates at the 1970 Annual Session giving the position of the MSMA on abortion was discussed. It was reported that the House of Delegates of the Osteopathic Association had not taken similar action. It was agreed that the position of the associations should be made known to the legislators if a bill is introduced.

Dr. Fisher reported that blood as a service was discussed along with the Illinois Supreme Court case. It was agreed that a bill to remove the implied warranty from blood was urgently needed to protect hospitals and physicians from liability. A proposed draft of a bill prepared

by the Missouri Hospital Association was discussed and it was understood that they will introduce the legislation. It was suggested that contact be made with the Hospital Association. Both associations should support the bill.

Discussion regarding statute of limitations on malpractice was held. It was agreed that if a bill similar to the one introduced in the 75th General Assembly is introduced in the 1971 Missouri Legislature, that the associations should vigorously oppose them.

Dr. Fisher reported that the recent opinion of the Attorney General concerning the Chiropractic Practice Act was discussed. It was mentioned that in Kentucky, legislation had been introduced to place chiropractors under the Medical Practice Act. Dr. Fisher stated that considerable discussion was carried on regarding AMA position on Chiropractic and situations in other states.

Proposed changes, in the Medical Practice Act, as recommended by the Board of Healing Arts, were discussed. Dr. Kasten explained to the Committee the extra costs incurred in licensing the physical therapists and examining and licensing foreign medical graduates.

The "sick doctor" statute recently enacted in Florida was discussed by the Committee, and staff was directed to contact Florida for a copy of the statute and information on their experience to date.

Dr. Fisher stated that Dr. Paul Young discussed the work of his committee concerning postgraduate training as a requirement for association membership and licensure. He mentioned plans that have been developed by several states, but so far, he knows of no state that has this as a requirement for continued licensure. Dr. Young reported that the Health Care Foundation could identify educational needs and programs could be planned accordingly with area physicians. It is recommended that close liaison between the MSMA and the Osteopathic Association be maintained for continuing education.

Dr. Fisher reported that the Committee discussed the Missouri Professional Corporation Act. It was suggested that a bill be introduced to allow an osteopathic physician and a medical doctor to form a professional corporation. A bill has been drafted for introduction in the next session of the General Assembly.

REPORT OF THE LEGISLATIVE COMMITTEE

Dr. Matthews, Chairman of the Committee on Legislative Affairs, gave a brief rundown on anticipated and proposed legislation before the 76th General Assembly.

Dr. Matthews discussed possible chiropractic legislative proposals. He also indicated that a meeting will be held with the Hospital Association regarding a proposed blood bill. He further stated that they also would discuss possible or proposed legislation regarding treatment of minors without parental consent and protective legislation for physicians serving on peer review committees.

On motion, duly seconded, the report of the Legislative Committee was approved and accepted. Motion carried.

Dr. Cope brought up the problem of certain elective operations being considered criminal acts. He moved that Mr. Noble and the Legislative Committee be charged with drawing up legislation to be presented at the next Council meeting that would give an individual the right to undergo a surgical procedure for the purpose of altering his physiology or anatomy, even though the procedure is not directed at the treatment of disease, and the performance of such a procedure will not constitute a vi-

olation of the law by either the surgeon or the patient. Motion carried.

Dr. Miller indicated that a bill is in the process of being drafted in Kansas City regarding elective operations and that he hoped to have a copy of this prior to the next Council meeting.—**Referred to Miscellaneous Affairs Committee.**]

HEALTH CARE FOUNDATION

■ Dr. Miller suggested that the Council take action to eliminate the State Policy Coordinating Committee for Peer Review which was appointed by the Council, stating that the responsibility of this committee would now be under the Board of Directors of the Health Care Foundation and will hereafter be defined by the Constitution and Bylaws of that Foundation. On motion, duly seconded, the Council agreed to dissolve the State Policy Coordinating Committee.

Dr. Miller said that he feels the Health Care Foundation is coming along fine and generally meets the recommendations that the AMA has set forth. He thanked the Council for the \$5,000 grant to support it and indicated that the Osteopathic Association has given \$2,000; St. Louis Blue Shield, \$25,000; and Kansas City Blue Shield, \$15,000. Dr. Miller asked that the Council support, in a resolution to the House of Delegates, a \$10 per member assessment for one year for the continuing development of the Health Care Foundation. He stated that possible financial support would be forthcoming from Medicaid and HIC, but felt that this \$10 assessment was needed to accommodate the proposed budget of \$100,000. He further stated that it seemed likely that at the end of 12 months, a cost analysis could be made to determine the per case cost.

After a brief discussion regarding such an assessment on the members, it was moved, seconded and agreed that this matter be tabled until the next Council meeting at which time it can be further considered.—**Referred to Resolutions Committee.**]

PRESIDENT-ELECT

Dr. Miller introduced the subject of payment of the President-Elect's expenses to AMA meetings. Dr. Fisher said that the presidents and presidents-elect of State Associations do meet during the AMA meetings. On motion, duly seconded, it was agreed that the MSMA budget expenses for the President-Elect to the two yearly sessions of the AMA, the Annual and Clinical Sessions. Motion carried.

NEXT COUNCIL MEETING

Mr. McIntyre proposed that the next Council meeting be held on Friday, January 29, and Saturday morning, January 30. The Officers' Conference will follow on Saturday afternoon and Sunday, January 30 and 31. Both meetings are to be held at the Ramada Inn in Jefferson City. The proposal was approved. The meeting adjourned.

Meeting of Jan. 29-30, 1971

Walter T. Gunn, M.D., St. Louis, Chairman, called the meeting to order. Those present were Drs. Gunn; John N. Martin, St. Joseph; Robert A. Mayer, Clayton; James C. Cope, Columbia; William D. Bradshaw, Clinton; R. A. Chandler, Kansas City; Howard J. McAlhany,

Springfield; E. A. Stricker, St. James; E. T. Hansbrough, Poplar Bluff; Joseph L. Fisher, St. Joseph; Gerald L. Miller, Kansas City; John I. Matthews, Jefferson City; Max S. Franklin, St. Louis; Doyle C. McCraw, Bolivar; E. D. Imes, Maryville; J. Loren Washburn, Versailles; Stanley S. Peterson, Springfield; Rae W. Froelich, Lebanon; Hector W. Benoit, Jr., Kansas City; William D. Mayer and William C. Allen, Columbia; Robert H. Felix, St. Louis; Richardson K. Noback, Kansas City; Charles R. Gulick and Herbert C. Wiegand, St. Louis; James W. Willoughby, Kansas City; Francis M. Maple, Springfield; Rolla B. Wray, Nevada and David N. Kerr, Clayton. Mrs. William Walker, President, Woman's Auxiliary, Springfield; Mrs. Frank J. Valach, President-Elect, Woman's Auxiliary, Creve Coeur. Messrs. John W. Noble, Kennett; William C. Lindsley, Jr., St. Louis; Edgar Mothershead, Clayton; Gary L. Schnedler, Springfield; Roger Weis, Kansas City; James W. Foristel, Washington, D.C.; Edward M. Hirsch, St. Joseph; John A. Hailley, Jefferson City; Tom P. Fox, Royal O. Cooper, Bob Carroll and Ray McIntyre, Jefferson City.

The Chairman introduced Mrs. Walker, President of Woman's Auxiliary, and Dr. Imes, Speaker of the House of Delegates, and welcomed them to the meeting.

Dr. Gunn called attention to the Council Minutes of December 12, 13, 1970, including the Budget figures on page 4 of the mimeographed copies as distributed. After discussion, on motion of Dr. Franklin, duly seconded, the minutes of the December 12, 13, 1970 Council Meeting were approved as distributed to the Council.

REPORT OF THE EXECUTIVE SECRETARY

■ Mr. McIntyre stated that from all indications, the legislative session this year will be one of the most difficult we have experienced. He stated that to date, more than 500 bills have been introduced in the House and about 200 in the Senate, and additional bills can be introduced until the first week in March. He mentioned that with annual sessions of the Legislature, that is, six months in 1971 and four months in 1972, there will be no let up in the work. This will be especially true if the 1971 session adjourns and the bills not acted upon in this session are held over for the 1972 session. In this event, we can look forward to much additional work and will need the support of the Legislative Committee as well as individual physicians.—**Referred to Miscellaneous Affairs Committee.**]

1971 ANNUAL SESSION PROGRAM

■ The Chairman called on Mr. Fox to give a résumé of the 1971 Annual Session program to date. Mr. Fox said that the program was shaping up very well with the exception of the kick-off program on "Medicare-Medicaid—Why the High Cost" on Friday morning, April 16, from 9:30 AM until noon. He mentioned that Dr. Bass, who is in charge of this portion of the program, is having difficulty in securing the desired speakers.

Attention was called to the New Member Orientation Program which is scheduled for Thursday, April 15, from 8:30 AM to 12-noon. Every effort will be made to contact all new members in the past year and a half and to publicize the program extensively. The program is being developed by an Ad Hoc Committee of the Commission on Public Affairs. Dr. Troy Morgan is Chairman of the Ad Hoc Committee.—**Referred to Medical Education Committee.**]

REPORT OF COMMITTEE ON CONSTITUTION AND BY-LAWS

■ Mr. Carroll presented the report of the Committee on Constitution and By-Laws in the absence of Dr. Hollweg, the Chairman. He stated that the Council had instructed the Committee to prepare amendments to the present By-Laws of the Association to eliminate the citizenship requirement for membership in the Association. The proposed by-laws change is to be submitted to the House of Delegates at the 1971 Annual Session. The Committee on Constitution and By-Laws recommended the following changes in the By-Laws of the Missouri State Medical Association: "That Chapter I. Membership., Section 1., be amended by deleting the words, 'a citizen of the United States' in lines 7 and 8"; and "that Chapter I., Membership., Section 4., Associate Members, be amended by deleting the following sentence: 'This shall include physicians who meet medical examiners' qualifications but have not received their citizenship, these Associate Members to apply for active membership within one year after citizenship is granted.'"

After discussion, the above report was approved by the Council for submission to the House of Delegates and will be included in the Delegate's Handbook.—Referred to Constitution and By-Laws Committee.]

■ Mr. Carroll stated that Dr. Robert Kelley had requested him to report to the Council regarding the budget request for Comprehensive Health Planning. He stated that the request was for a minimum of \$185,000, including state and federal funds, but the Governor's recommendation was for \$139,000, including state and federal funds. If the state will appropriate an additional \$8,865.00, with federal matching funds, a full funding of the \$185,000 requested could be obtained. He stated that Dr. Kelley would like to have Council approval to endorse their full funding request and that a letter be forwarded to Mr. Gene Sally in this regard. After discussion, on motion of Dr. Stricker, duly seconded, the Council agreed to endorse the full-funding request for Comprehensive Health Planning.—Referred to Medical Education Committee.]

MEDICAL-LEGAL COMMITTEE SURVEY

■ Mr. Cooper reported that Dr. Kerr's Planning Committee had cited the need for more background information on malpractice and that possibly more data could be collected. This item was referred to the Commission on Medical-Legal Affairs for further study. Mr. Cooper reported that a questionnaire to survey the malpractice and professional liability insurance situation has been developed that will provide pertinent information for the Commission. Dr. Yancey, Chairman of the Commission, would like Council approval and funds to proceed with the survey. The proposed questionnaire was reviewed and, after discussion, on motion of Dr. Cope, duly seconded, the Council approved the expenditure of \$700 to proceed with the survey.—Referred to Constitution and By-Laws Committee.]

Mrs. Pat Walker, President of the Woman's Auxiliary, was presented to the Council by Dr. Gunn. She stated that her job as President of the Auxiliary had a lot in common with the medical profession and that this past year has been a delightful experience, mostly because of the support of the physicians. She said much has been accomplished in the area of public relations, that the Health Careers Program in Greene County was an outstanding success and that they have been requested to

PHONOCARDIOGRAPHY PULSE TRACINGS VECTORCARDIOGRAPHY A WORKSHOP

September 27-30, 1971

This is an intensive four-day program covering in detail the field of phonocardiography and pulse tracings and vectorcardiography. Emphasis will be placed on the values and limitations of these techniques and related areas as applies to the patient's diagnostic problems. Two days will be dedicated to phonocardiography and pulse tracings and two days for vectorcardiography. The morning sessions will be devoted exclusively to individual analysis of tracings by the participants under the orientation of the local and guest faculties. This program is intended for those who wish a close and detailed exposure to the values and the limitations of these techniques.

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Guest Speaker

Bernard L. Segal, M.D.
Associate Professor of Medicine
Hahnemann Medical College and Hospital
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For Information Concerning
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Mr. William Nelligan
Executive Director
American College of Cardiology
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repeat the program next year. She stated that the support of the Council for their Environmental Health Program was most appreciated and that the Woman's Auxiliary is more than willing to be of assistance any time they are called upon.

REPORT OF STATE BOARD OF REGISTRATION FOR THE HEALING ARTS

■ Mr. Hailey, Executive Secretary of the State Board of Registration for the Healing Arts, presented a report to the Council regarding the licensure of foreign medical graduates following the Attorney General's opinion that the citizenship requirement for foreign medical graduates to obtain a license to practice in the state of Missouri was unconstitutional. He stated that the Board met on June 15, 1970 to formulate rules and regulations for this type of licensure in two areas: (1) The area of licensure by examination and (2) Licensure by reciprocity.

Mr. Hailey stated that the first effect was a great influx of inquiries regarding the possibility of taking the examination; approximately 1,400 inquiries have been received to date. He said they have sent out applications to take the examination to almost 900 of the 1,400. He stated that the Board has given two examinations to date, one in September and the regular examination in December, for a total of 330 examinations. Of this number, 301 have been issued licenses, 29 have failed—eight have failed twice. If the applicant fails twice, he has to take special training before he can take the examination for the third time. Three examinations are the limit. He also stated that between 70 and 75 licenses have been granted by reciprocity and the majority of the licensees are working in state institutions. Mr. Hailey stated that an emergency appropriation of \$28,800 had been requested; \$27,000 is for examinations and \$1,800 is for additional secretarial help. Mr. Hailey stated there are 372 licensed physical therapists in the state of Missouri at this time.

The Chairman thanked Mr. Hailey for a most informative report.—Referred to Medical Education Committee.]

COUNCILOR DISTRICT REPORTS

Dr. Martin, First District, requested information regarding a combined staff of M.D.'s-D.O.'s in hospitals. Discussion on this subject was deferred until later.

Dr. Martin also brought up the subject of diploma nursing schools as well as two-year nursing schools affiliated with colleges and suggested that the medical profession take a firm stand in favor of the two-year nursing schools affiliated with colleges. It was stated that further discussion of this subject would be held on Sunday along with the Commission on Interspecialty Medicine report.

Dr. Gunn, Third District, reported that Dr. Lawrence O'Neal had been installed as President of the St. Louis Medical Society at the Annual Installation Dinner on Tuesday, January 5. He stated that President Joseph L. Fisher and Mrs. Fisher were in attendance as guests, as well as Mr. and Mrs. Ray McIntyre.

Dr. Mayer, Fourth District, reported that St. Louis County Medical Society held their installation dinner on Friday, January 22, with Dr. Falls B. Hershey being installed as President, Dr. Jack R. Eidelman, President-Elect; and Dr. Klark Exarhou, Secretary. Dr. Mayer

stated that Dr. Hershey is looking forward to a year with close-working relationships with the St. Louis Medical Society. He also stated that many discussions and actions at the MSMA Council meetings are difficult to report to the local society because most of the business relates to overall state business and not to the specific grass roots of the rank and file. As a result, the Council of Medical Staffs was formed in St. Louis and is a worthwhile organization. They meet periodically and discuss medical problems. It was their thought that in order to form a closer liaison with the state and local societies, a representative from the MSMA Council might meet with their Council. He said that any way that we can promote closer relationship with all the doctors and hospital staffs will be most helpful.

Dr. Cope, Fifth District, reported that a group in Columbia is working toward the building of a new private hospital. Plans are well advanced and, in the near future, there should be a private hospital in Columbia which will relieve the crowded conditions at the Boone County Hospital.

Dr. Bradshaw reported that the Sixth Councilor District meeting on January 13 in Warrensburg was well attended. He added that Dr. Fisher and Dr. Benoit, along with Ray McIntyre and Royal Cooper were there. Following brief remarks from President Fisher, Dr. Benoit spoke about the new Health Care Foundation of Missouri. His talk was well received.

Dr. Bradshaw brought up the subject of ambulance service which he said is a major problem over the state and which should be discussed thoroughly. He stated that formerly funeral home ambulances were used, but this service is no longer available. Unfortunately, this leaves no ambulance service whatsoever in some areas. He said that the few who have tried to maintain ambulance service have lost money and were forced to quit. It was pointed out that residents of Nodaway County passed a levy of two mills to support and furnish ambulance service in that county.

Mr. Fox reported that a bill to license ambulances and attendants has been introduced in the Missouri Legislature by the Missouri Ambulance Association, an organization which was formed by private ambulance operators.

Dr. Chandler, Seventh District, reported that Jackson County held its installation dinner meeting on January 15, at which time Dr. Sidney Rubin was installed as President and Dr. Carl Peterson as President-Elect. He said that they were very pleased to have Dr. Fisher and Mrs. Fisher present on this important occasion.

Dr. McAlhany, Eighth District, reported that Greene County held its installation on Monday, January 22, at which time Dr. Oral B. Crawford was installed as President. About 200 persons attended.

Dr. Stricker, Ninth District, reported that his District also has problems concerning ambulance service and has gone the full cycle. He stated Phelps County's contract with a private concern was not too successful. The Hospital at Rolla now has two ambulances with two-way radios. St. James has one ambulance which helps in this situation.

■ Dr. Hansbrough, Tenth District, reported on a project being considered in the Farmington area which concerns the study of hospital medical records under the sponsorship of the Bi-State Regional Medical Program. The



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and Efudex® (fluorouracil) 5% cream can resolve it.

Call it actinic, solar or senile keratoses, many regard it as "precancerous."^{1,2}

Topical fluorouracil, considered by some dermatologists to be a major advance in the treatment of multiple solar keratoses,^{3,4} offers the physician a relatively inexpensive alternative to cryosurgery, electrodesiccation and cold knife surgery. Of the topical fluorouracils available, only Efudex offers 2% and 5% solution and 5% cream formulations—formulations that have proved effective in the treatment of these multiple lesions.

Usual duration of therapy, 2 to 4 weeks.

Studies showed that with the 2% and 5% Efudex preparations, the usual duration of therapy was only 2 to 4 weeks.⁵ Other studies with topical fluorouracil revealed that when concentrations of less than 2% were used, significant numbers of lesions recurred.⁶

Treats the lesions you can't see, too.

Numerous lesions, not apparent prior to 2% and 5% Efudex therapy, manifested themselves by definite reactions, while intervening skin remained relatively unaffected.⁵ The early eradication of these subclinical lesions (which may otherwise have undergone further progression) probably accounts for the reduced incidence of future solar keratoses in patients treated with topical fluorouracil—especially with 5% concentrations.⁶

How to identify solar keratoses.

Typically, the lesion—a flat or slightly elevated brown to red-brown papule—is dry, rough, adherent and sharply defined. Multiple lesions are the rule.

Predictable therapeutic response.

The response to a typical course of Efudex therapy is usually characteristic and predictable. After 3 or 4 days of treatment, erythema begins to appear in the area of keratoses. This is followed by a moderate to intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of this response generally occurs two weeks after the start of therapy and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. Lesions that do not respond should be biopsied.

References: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, Grune & Stratton, 1967, p. 842. 2. Dillaha, C. J.; Jansen, G. T. and Honeycutt, W. M.: "Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *Pharmaceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, p. 92. 3. Belisario, J. C.: *Cutis*, 6:293, 1970. 4. Sams, W. M.: *Arch. Derm.*, 97:14, 1968. 5. Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. 6. Williams, A. C., and Klein, E.: *Cancer*, 25:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)amino-methane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



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area also includes two areas in Illinois. There would be a seminar type program and Bi-State would send an expert to conduct such meetings, using local hospital records for study. The medical staff of the Farmington hospital has approved this program. Dr. Hansbrough read a letter received from Dr. Watkins of Farmington outlining the proposed program and stated that his group in Poplar Bluff also is interested. He mentioned that the Farmington group is the only group in Missouri involved at this time. Dr. Hansbrough stated that he will try to secure the results of this study for the Commission on Medical Education and Health Manpower. Mr. Fox reported that this is a pilot program which is of considerable interest to the MSMA Ad Hoc Committee on Continuing Medical Education.

Dr. Miller said that the Health Care Foundation of Missouri will, of necessity, be involved in this type of effort and expressed the hope that anything accomplished in this area could be extremely helpful to the Foundation and that some mechanism should be established for making the information available to the Foundation.

After further discussion, the Council voted "expressed interest" in this project with the request that the results of this study be given to the Commission on Medical Education and Health Manpower for use in setting up educational programs. This matter also was referred to the Commission on Medical Education and Health Manpower for their information and study.

REPORTS OF MEDICAL SCHOOL DEANS

Dr. Felix, Dean of St. Louis University Medical School, stated that he had no specific report. He said that their building program is progressing nicely. He said that St. Louis University has had a large influx of applicants for admission, but only a limited amount of space is available. He also mentioned that one of their interns applied for a residency in New York, but was turned down because he had not as yet completed his military service.

Dean Mayer of the University of Missouri Medical Center-Columbia stated that he had appeared before the Legislature to ask for emergency appropriations for the University which involves two components: (1) Emergency funds in the amount of \$544,666 for the final four months of 1971 and (2) a request for emergency funds in the amount of \$134,000 for the opening of the new school of medicine in Kansas City. The request was passed by the House last week, but the Senate Appropriations Committee has not made a report as yet. Dr. Mayer distributed copies of a summary with detailed information about how the money would be used.

Dr. Noback gave a brief progress report on the new Medical School in Kansas City and stated they were moving along nicely in their planning. He said that a large number of inquiries about the six-year program had been received from students who would start in the first year right out of high school. He said there are about 200 physicians in Kansas City working to develop specifications for curriculum for the medical school. He said that progress is being made on the building plans from the appropriations that were received last year plus \$8.8 million in federal money. A request for \$134,000 in emergency appropriations is before the Legislature now, which, if approved, will finance the school to July 1, 1971. Dr. Noback stated that if all goes well and additional funds are made available, they hope to enroll 36

medical students in September, 1971.—Referred to Medical Education Committee.]

REPORT OF THE TREASURER

Dr. Franklin gave a brief report of the financial result of the activities of the Association for the calendar year 1970 and stated that the income over expenses was an excess of \$2,521.67. He stated that the 1970 audit of the Association's accounts will be published in the March, 1971 issue of *MISSOURI MEDICINE* and also will be included in the Delegate's Handbook for the 1971 Annual Session.

After discussion, on motion of Dr. Franklin, duly seconded, the Treasurer's Report was approved.

Discussion regarding the difficulty in selling exhibit space for the Annual Session followed. It was pointed out that more and more of the pharmaceutical companies are exhibiting at national medical meetings and eliminating some state meetings, possibly because of manpower shortage to man the booths. It was suggested that the staff contact not only the companies that have refused, but any others that may be interested, and suggest that when they rent space, MSMA will put an appropriate acknowledgement in the proposed booth. After discussion, on motion of Dr. Cope, duly seconded, it was agreed the staff would pursue this suggestion.

MISSOURI STATE ALLERGY ASSOCIATION

■ Dr. Willoughby reported that the Missouri State Allergy Association, Inc., a non-profit corporation chartered in the State of Missouri, held its founding meeting on Jan. 16, 1971. He said the purpose of the organization is a dedication to more efficient delivery of allergy health care in the state and the establishment of clinical allergy teaching programs in Missouri's medical schools. He stated that the annual meeting of the new organization will be held on April 16, 1971 in St. Louis during the annual session of the MSMA.

Dr. Willoughby stated that in behalf of the Allergy Association, he would like to request that the Council recognize the newly-formed Missouri State Allergy Association. There are approximately 25 members in the state of Missouri. It is not a large specialty but they represent a majority of the practicing allergists in Missouri. Dr. Willoughby also stated that the allergists feel they can perform a service from the standpoint of peer review, as well as maintain active allergy teaching programs in the state. He stated that if the Association should dissolve at any time, the assets will go to the University of Missouri for teaching purposes.

Dr. Willoughby also stated that through the component specialties, it is hoped they will have the opportunity to participate in the scientific programs of MSMA beginning in 1972.

After further discussion, it was moved and seconded that the Council officially recognize the Missouri State Allergy Association and authorize the Association to have a representative on the Interspecialty Commission. The motion carried.—Referred to Resolutions Committee.]

ABRIDGED INDEX MEDICUS AUTOMATED BIBLIOGRAPHY NETWORK: (AIM-TWX)

■ Dr. William Allen presented information regarding the establishment of an AIM-TWX Search Center by the Lister Hill National Center for Biomedical Communications on the University of Missouri-Columbia campus.

He stated that the University is interested in seeing a center established in Columbia which would make the system more readily available both in reduced communication line charges and accessibility to users in and near Missouri.

He stated that the AIM-TWX has a ten-second access to any page of the 100 most used medical journals that comprise this data base collection (for the past 2½ years). He stated that any physician would have access to this service by calling the Regional Medical Program in Columbia. He said that they would appreciate receiving letters from various organizations which might be interested in this system in order to promote the establishment of an AIM-TWX Center in Missouri.

After discussion, on motion of Dr. Stricker, duly seconded, it was agreed that a letter be forwarded to Dr. Clayton expressing MSMA's interest in the establishment of an AIM-TWX Center at the University of Missouri-Columbia Campus.—Referred to Medical Education Committee.]

REPORT ON IRS HEARING

Mr. Noble reported that MSMA has been assessed a certain amount of taxes by the IRS on Journal advertising defined by them as unrelated income. He stated that we have filed a protest and had a District Conference meeting with IRS on January 27 with Mr. Lennertson, our auditor, and Legal Counsel representing MSMA. Mr. Noble stated that following the hearing, the District IRS representative indicated that direction from the central office of IRS in Washington might be helpful in this case and another conference may then be in order.

REPORT OF COMMITTEE ON LEGISLATIVE AFFAIRS

■ Dr. Matthews, Chairman of the Committee on Legislative Affairs, reported that the Committee met on Thursday evening, January 28 to discuss various bills of interest to medicine in the 76th General Assembly. Following is a list of bills introduced, along with an indication for support or opposition of the bill:

S.B. 7 and H.B. 236—Would provide that transactions involving transfusion of blood and the transplanting of organs shall be a service and not subject to any implied warranties. The Committee recommends support of this legislation.

S.B. 8—Would set a limit of \$50,000 on the tort liability of hospitals and their trustees, directors, employees or volunteer workers. The Committee recommends support of this bill.

S.B. 9 and H.B. 301—Would require physicians and dentists applying for membership on a county hospital staff to provide on written form information concerning training and qualifications and accept the board as supreme governing authority of the hospital and authorizes the board to adopt bylaws, rules, regulations and policies regarding professional activities in the hospital upon recommendations from the medical staff. Committee recommends support of this legislation.

S.B. 22—Would enact an Environmental Protection Act authorizing political entities and private persons to sue for relief against pollution. The Committee recommends support of this bill.

S.B. 28 and H.B. 29—Would exempt physicians and surgeons and registered nurses from civil damage liability while rendering in good faith, emergency care at

the scene of an emergency (Good Samaritan). Committee recommends support of this legislation.

S.B. 126, H.B. 116, H.B. 196—All permit minors between the ages of 18 and 21 to donate blood without authorization of parent or guardian. Committee recommends support of this bill.

S.B. 137—Would put the Blues under the jurisdiction of the State Division of Insurance with a premium tax. The Committee recommends to oppose this bill.

H.B. 17—Extends Medicaid to include diagnostic visits of welfare patients under 21 and also provides home

The MSMA Woman's Auxiliary



The Woman's Auxiliary to the MSMA held its convention in conjunction with the Annual Session. Mrs. William M. Walker of Springfield (left), 1970-1971 President, presents the President's pin to Mrs. Frank J. Valach of St. Louis County at the Auxiliary's Installation Luncheon in the Tiara Room atop the Park Plaza Hotel.



Booth No. 19 of the Scientific Exhibits at the MSMA Annual Session featured a special exhibit on Missouri's environment sponsored by the Woman's Auxiliary. (Left to right) Mrs. Jordan Kelling of Waverly, Mrs. Valach and Mrs. Walker peer into the unique "meditator" which was shipped to Atlantic City for display at the AMA Convention on June 20-24.

health care services for all eligible for Medicaid. The Committee recommends support of this bill.

H.B. 46—Permits the seizure of any hallucinogenic, hypnotic, somnifacient or stimulating drugs and seized drugs could be distributed to nonprofit hospitals. The Committee recommends support of this bill.

H.B. 66—Extends to second class counties the authority to enforce air pollution regulations. The Committee recommends support of this bill.

H.B. 69—Calls for cooperation of the Department of Health and Welfare with federal and other state agencies in suppression of traffic in dangerous substances, exchange of information, training programs in law enforcement and educational programs. The Committee recommends support of this bill.

H.B. 70—Provides the court procedure, medical examination and requirement of legal counsel for any person believed to be a narcotic addict or a drug dependent person. The same procedure in reverse could be used to free the person on not less than three years probation if treatment is believed successful. The Committee recommends support of this bill.

H.B. 238—Reduces from .15% to .10% the weight of alcohol present in the blood to indicate a driver is intoxicated. The Committee recommends support of this bill.

H.B. 95—Would change the malpractice statute of limitations in Missouri from the present two years from the act to two years from discovery in all cases. The Committee recommends opposition to this bill and support of Senate Substitute introduced in 75th General Assembly.

H.B. 147—Creates a Missouri Board of Psychologist Examiners to pass on the qualifications of applicants for psychologist licenses. Committee recommends umbrella concept and redefining of psychotherapy.

H.B. 168—Requires the display of a yellow fluorescent, triangular "slow moving vehicle" emblem on such vehicles, including farm machinery, if moved on a public road or highway. The Committee recommends support of this bill.

H.B. 73—Permits a minor to get medical treatment for pregnancy, venereal disease or drug abuse without parental consent. The parents or guardian may be notified, but they are not liable for payment. It was recommended that this bill be supported in principle. On motion, duly seconded, it was agreed by the Council that this bill be opposed unless amended to limit liability of physicians treating minors.

H.B. 79—This bill is designed to greatly expand the present Chiropractic Practice Act. The Committee recommends that this bill be opposed.

H.B. 214—Permits Doctors of Medicine and Doctors of Osteopathy to jointly form a professional corporation. The Committee recommends support of this bill.

H.B. 216—Puts conviction on a county or municipal ordinance for a drunk driving or under the influence of narcotic drugs on the same level as a state court conviction, with a 12 point assessment against the license and automatic suspension of the right to drive. The Committee recommends support of this bill.

H.B. 236—Provides that "no suit, action or proceeding shall be had or maintained against any physician, surgeon, nurse or hospital for damages resulting from a disease caused by a blood transfusion or medically accepted therapy unless the disease is capable of diagnosis

at the time of the transfusion or therapy or currently accepted medical tests or procedures." The Committee recommends support of this bill.

H.B. 240—Provides that no person except a licensed physician, surgeon, or registered optometrist may advertise "eyes examined." Tightens the regulation on sale of eye glasses. This bill is being reviewed by the ophthalmologists and no stand has been taken at the present time.

H.B. 274—Authorizes the state to pay private medical or osteopathic schools in Missouri \$4,000 a year in contract for the education of Missourians in the medical arts. The Committee recommended support if funds are available with the following priorities: (1) University of Missouri Medical School-Columbia; (2) University of Missouri Medical School-Kansas City; (3) State aid to private medical schools, as indicated in *H.B. 274*.

H.B. 280—Provides that any licensed osteopath who later earns the degree of Doctor of Medicine from a school accredited by the American Medical Association is entitled to have the degree Doctor of Medicine added to his license. The Committee recommends no position on this bill.

H.B. 241—Bars the use of any lead-bearing substance on any exposed surface or dwelling unit or in or on any toys or furniture. The Committee recommends support of this bill.

H.B. 285—In cases of child abuse, the county director of welfare or the county juvenile officer must notify appropriate law enforcement officers immediately. The welfare officer must investigate cases of child abuse or neglect and report to the law enforcement officer and the county juvenile officer, including any reports of previous abuse or neglect reported to him by the state welfare office. The juvenile officer then makes a follow up investigation and reports his findings within 20 days. The Committee is investigating this bill and recommends no position at the present time.

H.B. 317—Provides for the licensing and regulation of radiologic technologists. Committee recommends opposition to this bill.

H.B. 336—Extends state Division of Health controls over immunization procedures to include rubella. Committee recommends support of this bill.

H.B. 333—Provides for the examination and licensing of persons fitting and dealing in hearing aids. This bill is being reviewed by the ENT physicians and no stand has been taken at the present time.

Dr. Matthews reported that his Committee discussed whether or not legislation was needed to remove the citizenship requirement from the Medical Practice Act. This matter was referred to Mr. Hailey of the State Board of Registration for the Healing Arts.

Dr. Matthews indicated that legislation has been drawn up regarding the immunity from liability for review physicians and a sponsor for the bill is now being sought. He further stated that legislation has been drawn up regarding general consent for medical care and surgical procedures and a sponsor is also being sought for this bill.

After a discussion regarding the above bills and their possible implications, motion was made and seconded to accept the amended report of the Legislative Affairs Committee with commendation. Motion carried.

Dr. Matthews stated that Annual Sessions of the Gen-

eral Assembly will be much more expensive to the MSMA, in view of the fact that much more time and effort on the part of the staff will be necessary in order to keep abreast of the many bills being introduced.

Dr. Matthews indicated that last year, members of the MSMA held a luncheon with our Congressmen and Representatives in Washington, D. C. He requested that the Council authorize the expenditure of a similar amount for the luncheon this year. On motion of Dr. Bradshaw, duly seconded, the Council authorized such expenditure.

On motion of Dr. Cope, duly seconded, it was agreed that the matter of annual sessions of the Legislature be put into the hands of the Planning Committee and request they propose some definite recommendations on this matter to the Council. Motion carried.—*Referred to Miscellaneous Affairs Committee.*

COUNTY SOCIETY OFFICERS' CONFERENCE

Mr. Carroll gave a brief résumé of the program topics and speakers for the Fourth Annual County Society Officers' Conference of the MSMA to be held Saturday afternoon, January 30 and Sunday morning, January 31, and invited all present to attend. On motion, duly seconded, the report regarding the County Society Officers' Conference was accepted.

MISSOURI STATE MEDICAL FOUNDATION

Mr. Fox reported on the Missouri State Medical Foundation indicating that the Foundation filed with IRS as a private operating foundation. However, they have not agreed to this so the matter is still under consideration.

Mr. Fox stated that the MSMF had granted a total of 73 loans during the year, 1970, in the amount of \$52,800.00. He gave further statistics regarding the 1970 loans which will appear in the MSMF financial report in the Delegates' Handbook. He reported that 43 loans in the amount of \$28,925.00 had been granted for the 1971 spring semester.

Mr. McIntyre said that loan repayments are being stepped up and it is hoped this will continue. He further indicated that with the University of Missouri Medical School at Kansas City, it is anticipated that there will be additional medical students requesting loans from the MSMF.

R.N. MIDWIFERY

■ Dr. Miller spoke on the education and possible licensure of R.N. midwives. He stated that if such could be accomplished, it would give the OB-GYN manpower more time to devote to the high risk individuals and other related areas. He further indicated that several universities have in the past five or six years initiated curriculum for periods of 12-18 months to bring these people back to where they fit into the total care of the OB patient. Dr. Miller said that if learning institutions do establish such programs, it would seem proper that they be licensed under the umbrella concept to insure placement of them. He stated that, hopefully, there will be legislation to this effect submitted in the next 30 days in the Missouri Legislature.

Dr. Gunn indicated that this would come under the Physician Assistants Program which would be discussed by Dr. Gulick later on in the meeting.

REPORT OF COMMISSION ON INTERSPECIALTY MEDICINE

Dr. Gulick, Chairman of the Commission on Interspecialty Medicine, reported that his Commission met on January 17 in St. Louis. At that time, Dr. Benoit gave the Commission a brief progress report on the new Health Care Foundation.

Dr. Gulick reported that it was agreed by his Commission that medical specialties represented by more than one specialty organization should confer and appoint a single representative to serve on the Interspecialty Commission. If not solved by the time of the MSMA Annual Session, the Commission will recommend such appointees for approval by the President. Particular reference was made to two general surgery organizations and two psychiatric organizations. He further indicated that the surgeons have solved their problem. Both the Missouri Surgical Society and the Missouri Chapter of the American College of Surgeons will be represented on the Interspecialty Commission, but the Missouri Surgical Society will be the representative when matters of economics are discussed.

Dr. Gulick stated that the Commission discussed the up-dating of the 1967 cut-off fee schedules which were prepared and submitted to the Division of Welfare for administration of the Medicaid Program. He further stated that one of the specialties did a comparative study in November, 1970 and reported only slight increases. In lieu thereof, the Commission recommends to the Council that no further fee schedule studies be done at this time and suggests that the Health Care Foundation of Missouri might consider utilizing, in the future, the existing 1967 cut-off fee schedules updating them by utilizing cost of services indices or other appropriate methods. Dr. Gulick further recommended that if no further fee schedule studies are to be done at this time that no distribution of the 1967 cut-off fee schedules be made to anyone.

On motion, duly seconded, the Council agreed that no further fee schedule studies be done at this time and that the Health Care Foundation, if desired, later request permission to utilize the 1967 cut-off fee schedules. Also on motion, duly seconded, the motion made at the October meeting regarding distribution of these fee schedules to the Interspecialty Commission was rescinded.

Dr. Gulick reported that at the October Council meeting, the Council asked that further and continued study be made regarding the Physician Assistant Program. He stated that his Subcommittee held a meeting on Nov. 4, 1970 in St. Louis and, subsequently, reported to the full Commission at its January meeting. With Commission membership approval, Dr. Gulick requested Dr. William Stoneman to serve as Chairman of the Subcommittee to continue study of the Physician Assistant Program. Dr. Gulick said that Dr. Stoneman reported on progress and developments to date at the national, state and various local levels. Considering action taken by institutions and related health career groups in the development of physician assistant programs, especially in metropolitan areas, the Commission, after thorough discussion, suggests the following for Council approval:

"1. MSMA endorsement and support of physician assistant training programs in principle." Dr. Gulick stated that his Commission was seeking reiteration of MSMA

endorsement and support prior to continuation of the study. On motion of Dr. Miller, duly seconded, the Council reemphasized endorsement and support of the Physician Assistant Training Program in principle to include education and licensure for R.N. midwifery. Motion carried.

"2. MSMA Council approve release and/or publication in MISSOURI MEDICINE of the MSMA Physician Assistant Study conducted by the Subcommittee, comprised of Drs. Gulick, Hawkins and Stoneman to learn attitudes of physicians across Missouri regarding a new Physician Assistant Program. Before release, the results of the study will be edited by the Subcommittee for publication." Dr. Gulick indicated that he would like to see this study published as a project of the MSMA and have them take credit for it. Discussion followed regarding the clarification in the study that when the questionnaires were sent to a group practice, only one physician was asked to fill it out, and it might not necessarily reflect the opinions of the entire group. Dr. Gulick stated that this would be spelled out by the Subcommittee editing the study for publication. On motion, duly seconded, the Council agreed to the publication of the Physician Assistant Study in MISSOURI MEDICINE.

"3. Suggest MSMA Council ask the MSMA Committee on Legislative Affairs, the MSMA Commission on Medical-Legal Affairs to work jointly with the Subcommittee of the Interspecialty Commission Physician Assistant Program to (a) determine legal status establishing certification or licensure of physician assistants possibly using the umbrella concept similar to physical therapists; and (b) seek opinion of the Missouri Attorney General in defining what constitutes the practice of medicine."

Dr. Gulick stated that he felt we need to establish guidelines for programs to follow, specifically medical-legal guidelines. After discussion and on motion, duly seconded, the Council approved #3 above with the deletion of (b) regarding the Attorney General's opinion.

"4. Study of the proposed curriculum for implementation in medical schools would be studied and developed at a later date." Dr. Gulick said there is now a program of this type at St. Louis Children's Hospital which may be of some assistance regarding proposed curriculum, etc.

The Chairman informed Dr. Gulick that the Missouri State Allergy Association will have a representative on the Interspecialty Commission. Further discussion followed regarding representation on the Interspecialty Commission. It was pointed out that each statewide specialty group as recognized by the MSMA Council is entitled to representation on the Interspecialty Commission.

On motion, duly seconded, the report of the Interspecialty Commission was approved, as amended, with commendation. Motion carried.

COMMISSION ON MEDICAL ECONOMICS, THIRD PARTY MEDICINE AND GOVERNMENTAL RELATIONS

Dr. Wiegand, Chairman of the Commission on Medical Economics, Third Party Medicine and Governmental Relations, gave a brief explanation of the items referred to the Commission by the 1970 House of Dele-

gates. He stated that there were three items referred as follows: (1) Various comments about the manner in which Blue Shield in the St. Louis area and, to some extent, the Kansas City area were performing and certain resolutions about Blue Shield; (2) Some functions of St. Louis Blue Cross; and (3) the need for MSMA or some part of MSMA to deal with the matter of fee negotiation, i.e., circumstances and conditions under which the physicians in this area would like to operate in dealing with third parties or any type of insurance carriers or fiscal intermediaries. He stated that the Commission decided to handle these referrals by the organization of three Ad Hoc Committees.

Dr. Wiegand then asked Dr. Maple, Chairman of the Ad Hoc Blue Shield Committee, to report on the functions of his committee. Dr. Maple explained the work of his Committee and the methodology used to develop the recommendations to the Commission at its meeting on January 24. He stated that the Commission adopted his committee's recommendations which were presented to the Council as follows:

1. *Membership—Missouri Medical Service, St. Louis.* That the Missouri Medical Service of St. Louis enlarge its membership to include Doctors of Osteopathy and Doctors of Dentistry as participating members and that all participating members be members in good standing of the component society of the American Medical Association, National Medical Association, the American Osteopathic Association or the American Dental Association.

After discussion, on motion of Dr. Miller, duly seconded by Dr. Hansbrough, the above item #1 was adopted.

2. *Governing Board—Blue Shield of Kansas City.* That the nonmedical members elected by the Board of Directors be nominated by their respective County Medical Societies with representation to occur on an equitable basis throughout the 32-county operating area.

Missouri Medical Service—St. Louis. That nominations to the Board of Trustees be made by the local county medical societies (as well as nominations of subscriber members for the Board of Trustees). Then allow all of the participating physicians to vote so there will be a direct relationship of nominating and voting by the participating members and allow the Board of Trustees to elect the subscriber member of the Board. Having appropriate osteopathic physicians on the governing Board of Trustees should be carried out so as to give access to this important segment of physician care in this state.

After discussion, on motion of Dr. Miller, duly seconded, this portion of the report was accepted.

3. *Meetings—Missouri Medical Service.* A minimum number of meetings should be set in the by-laws for the Board of Trustees with additional meetings to be called by the President or a certain number of the Board of Trustees or by a certain number of participating members.

After discussion, on motion of Dr. Martin, duly seconded, this portion of the report was approved.

Discussion followed regarding a directive from the Commission on Medical Economics, etc. to the Ad Hoc

Committee to develop guidelines as to what constitutes a basic comprehensive health insurance program. Dr. Maple explained that this was not spelled out in the Committee report, but that he would give a brief run-down on the items which would be considered at a later meeting of the Ad Hoc Committee. He said the committee discussed what might possibly be phased into Level I benefits, such as (1) preventive and maintenance care for children with periodic check-ups; (2) diagnostic workups and therapy to catch the disease in its inception; (3) chronic disease care; (4) rehabilitation care; and possible addition of appliances which might be applied to the body. He stated that these are the areas of scope of the medical care we are talking about.

Level I care, the amounts of money generated for use and attributable under inpatient hospital, outpatient, extended care, nursing home, home, office, etc. All of these areas must be covered with equal access of money under any co-insurance applied at the high level as against office care. He stated that the last portion of Level I care should include dental care for children, but not orthodontia, up to the age of 18. Dr. Maple stated that the committee took no action at this time, but planned to study this in detail and report back at the next meeting which is scheduled for February 12.

Discussion followed regarding support and acceptance of the CPT Second Edition system. This is the five-digit system. It was pointed out that the Council discussed this at its meeting in May and decided not to approve the change-over from the four-digit to the five-digit system because of the difference in cost which would have to be placed on the subscribers of the Blue Plans.

Dr. Wiegand thanked Dr. Maple and his Committee for the tremendous amount of work and effort put forth.

REPORT OF AD HOC COMMITTEE ON BLUE CROSS

In the absence of the chairman, Dr. Hetlage, Dr. Wiegand reviewed the minutes of the Ad Hoc Blue Cross Committee which were presented to the Commission on January 24, and pointed out that this Committee was asked to study certain functions of the St. Louis Blue Cross plan. He stated that the Committee studied the three resolutions referred to them by the 1970 House of Delegates in regard to (1) Questionable Decisions against Part A Medicare Patients by St. Louis Blue Cross, (2) Utilization Review Committees and (3) Extended Care Claim Rejections. It was pointed out that the work of this Ad Hoc Committee was not to criticize the carriers and fiscal intermediaries, but to establish communication and develop guidelines to assist physicians and utilization review committees.

Dr. Wiegand presented the following recommendations by the Committee and Commission for Council approval:

1. Circularization in MISSOURI MEDICINE of Social Security Administration guidelines pertaining to extended care.
2. Improvement of communications between carriers and physicians by means of periodic regional or local conferences.
3. Justification of necessary hospitalization needs by means of pertinent record-keeping on the part of each individual physician.
4. Encourage carriers to utilize more detailed information from medical records than has heretofore been

required, and further to encourage personal contact with the attending physician prior to final rejection of a claim.

5. Approval prior to transfer of a patient to extended care facility that acute care facility URC approve, utilizing SSA guidelines, the need for the transfer to extended care facility.

After discussion regarding the above recommendations, on motion of Dr. McAlhany, duly seconded, it was agreed to approve this portion of Dr. Wiegand's report regarding the Ad Hoc Blue Cross Committee.

REPORT OF AD HOC COMMITTEE TO STUDY NEGOTIATION OF PROFESSIONAL FEES

Dr. Wiegand called on Dr. Peterson, Chairman of the Ad Hoc Committee to Study Negotiation of Professional Fees, to present his report. Dr. Peterson reported that the Committee studied the resolution adopted by the 1970 House of Delegates and it was the consensus of his committee that the mechanism that would provide for the negotiation of professional fees and establish the rules, regulations and procedures under which physicians render their services should be developed within the framework of organized medicine.

Dr. Peterson stated that his committee recommended to the Commission that legal counsel be provided to assist this Ad Hoc Committee in establishing the mechanism called for in the resolution. The recommendation was approved by the Commission.

Discussion followed regarding the necessary funding which would be required for such a project. It was pointed out that approximately \$500 would be needed at this time. On motion of Dr. Bradshaw, duly seconded, the Council agreed to allot \$500 to the Ad Hoc Committee to Study Negotiation of Professional Fees to obtain legal counsel to assist in establishing the mechanism called for in the resolution.

On motion of Dr. Miller, duly seconded, the Report of the Commission on Medical Economics, Third Party Medicine and Governmental Relations was approved as a whole.—Referred to Resolutions Committee.]

SELECTIVE SERVICE SYSTEM

Dr. Kerr discussed briefly his role as Chairman of the Missouri Advisory Committee to the Selective Service System. He stated that if a physician is called into service and wishes to appeal it, he can do so by going through his local draft board. He further stated that he understood that a freeze will be put back on in July regarding physicians getting into the reserves.

DELEGATE'S HANDBOOK MATERIAL

Mr. McIntyre gave a brief run-down of the items which would be included in the Delegate's Handbook, such as the list of times and places for Reference Committee meetings; a list of Councilors and Officers; Council Meeting minutes; Commission and Committee reports; Financial Statement of MSMA and MSMF; County Society Resolutions; and Resolution regarding continued membership assessment for MSMF.

■ It was moved and seconded that the following resolution be incorporated in the Delegate's Handbook:

Resolved, That the annual dues assessment of ten dollars (\$10) be continued for each active Missouri State Medical Association member and five dollars (\$5) for each junior member for the three-year period 1972, 1973, 1974, for the support of the Missouri State Medical Foundation.

The motion carried.—Referred to Constitution and By-Laws Committee.]

Mr. McIntyre indicated that all county medical society resolutions should be in by February 20 for inclusion in the Handbook.

Dr. Cope suggested that a detailed explanation of the new Health Care Foundation of Missouri might be included in the Delegate's Handbook.

REPORT OF THE PRESIDENT

Dr. Fisher stated that he felt that everyone was well pleased with the way the new organizational structure is working out with the Association's Commissions and Committees.

He said he has been concerned about active participation of younger physicians in our Association. He further added that discussion has been held previously about representation from residents, interns, etc. in the House of Delegates and stated that Dr. Miller has suggestions concerning an Advisory Committee to the President of MSMA which could include younger physicians. Perhaps they might be invited to attend periodic Council meetings.

Dr. Fisher stated that a problem might be forthcoming regarding foreign medical graduates and the distribution of MSMA 50-Year pins to member physicians who have been in the practice of medicine for 50 years. He indicated that up to this time no definite guidelines have been set regarding the distribution of the pins, and he felt that the Council should set a precedent regarding who should receive the 50-Year pin. On motion of Dr. Stricker, duly seconded, it was agreed by the Council that any physician who has been in practice for 50 years and is a member of the MSMA at that time should receive the 50-Year pin. Motion carried.

Dr. Fisher read a letter from Dr. Domke, Acting Director, Missouri Division of Health, requesting Mr. McIntyre's participation as a member of a sub-task force on Physician Manpower in Missouri. The purpose of this task force will be to identify reliable sources of information and analytical models to be used by the proposed state center for health statistics. Mr. Charles Henne-meyer, Director, Bureau of Planning and Development, will act as staff member for this committee.

President Fisher read a letter from the Senior Editor of *AMA Newsletter* which was accompanied by a questionnaire regarding national health insurance. He asked for the Council's views on the questions raised in the questionnaire and indicated that it would be returned with their answers.

Dr. Fisher read a letter from Dr. Vern Wilson reiterating that he is a friend of organized medicine and attached a copy of a letter written to Dr. Bill Allen, which may be published. Dr. Allen is planning to put an article to this effect in the February issue of the *GP Journal*.

Dr. Fisher said that a letter had been received from Dr. Russell Crider of St. Charles expressing the need for mandatory rubella inoculation. He stated that Dr. Matthews indicated in his legislative report that such legislation has been introduced and he recommended MSMA support of it.

Dr. Fisher stated that a letter had been received from Dr. Ernest Howard acknowledging the letter to him from MSMA recommending Dr. Benoit for considera-

tion to serve on the AMA Council on Medical Services, and stating that it would be referred to the AMA Board of Trustees.

Mr. Mothershead reported that the trip planned by the St. Louis County Medical Society for Acapulco, which was to begin in St. Louis on March 27, has been cancelled. However, the Mediterranean cruise planned for September is still available.

HEALTH CARE FOUNDATION

■ Dr. Benoit reported that the Board of Directors of the Health Care Foundation of Missouri held their first meeting on December 19 and a second meeting on January 29. The December 19 meeting was an organizational meeting and included recognizing existing problems. The officers of the Foundation are Hector W. Benoit, Jr., M.D., Chairman; Richard A. Michael, D.O., Vice Chairman; Claus A. Rohweder, D.O., Secretary; and John I. Matthews, M.D., Treasurer. Dr. Benoit stated that the Chairman appointed the following committees: Nominating Committee, Budget Committee and By-Laws Committee. The name of the State Policy Coordinating Committee for Peer Review was changed to the Central Coordinating Committee and consists of six M.D.'s and three D.O.'s. The Nominating Committee was given the responsibility of presenting a slate of nominees for the Judicial Committee as well as a slate for new Board members and nominations for Chairman of the Board.

A Recruitment Committee was formed consisting of the officers of the Foundation and Dr. Miller to recruit appropriate staff.

Dr. Benoit indicated that a bank account has been opened, liability insurance has been taken out and discussion was held regarding staff, office space and equipment.

Dr. Benoit reported that all members of the Board were present at the meeting held on January 29, plus all members of the Central Coordinating Committee. The By-Laws Committee reported on a change in the By-Laws which have been approved by the Board.

The Budget Committee met in conjunction with the Board meeting on January 29 and many housekeeping items were taken care of. Office space for the Foundation has been secured in the Medical Arts Building; a part-time secretary has been employed to begin work the middle of February; telephones will be installed soon; stationery is being printed and typewriters, etc. are on order. Funds of \$47,000 have been obtained and it was indicated that a budget of between \$47,000 and \$50,000 a year probably would sustain the Foundation. It was stated that the Foundation must generate finances for the next year. At the present time, the Board does not feel that an assessment of the membership is indicated.

Dr. Benoit stated that negotiations with General American Insurance Co. have not been satisfactory. General American indicated that any contract they would sign would have to be approved by SSA. Dr. Benoit said that the Board can foresee no problem with Kansas City Blue Shield. The Missouri Division of Welfare, handling Medicaid, stated that they cannot pay the Foundation for services directly but can pay physicians.

The Foundation is identifying a claim as being a claim for one patient, for one illness, under one physician, for one month. Dr. Benoit stated that we probably

will be provided with profiles of a broad spectrum of patients. They will feed the statistics to us, originally probably of physicians covering the propriety of treatment over a broad spectrum of patients. The statistics will have to be summarized and an action taken. For this type of profile study which we have categorized as a profile of a physician, a patient or an institution, we will charge a definite flat rate. In addition to these two categories, we have stipulated that if an on-site visit is required for investigation of either of the previous categories mentioned, there will be an additional charge to include costs such as transportation, lodging and meals as well as per diem.

Dr. Benoit indicated that the Foundation is contemplating a dinner meeting and inviting top executives of the larger private carriers (HIC members) and, possibly, members of insurance management firms throughout the state to explain to them what the Health Care Foundation proposes to do, how we propose to help them and how we can basically improve the quality of care. No definite date has been set for this proposed meeting.

Dr. Benoit reported that through the help of Dr. Weil at the University of Missouri, it is anticipated that the Foundation will be able to attract an experienced, full-time staff member to commence work sometime around June 1. As far as staffing the panel review levels, the Foundation is looking for graduate students, possibly from Dr. Weil's department, wherein the cost will not include any salary. It would be an educational experience as far as they are concerned, which apparently is acceptable to Dr. Weil. The Foundation would need to pay only such costs as incurred in the staff work involved. Dr. Benoit asked that if anyone knows a person who might be acceptable for this type of work to let him or Mr. Cooper know. He suggested people such as medical record librarians, assistant hospital administrators, etc.

Dr. Benoit further reported that according to the By-Laws, the Foundation is to make an annual report to the entire administrative membership and any participating members who care to appear. One year, this would be done in conjunction with the MSMA Annual Meeting and the following year in conjunction with the MAOPS Annual Meeting. Since the meetings are being held simultaneously this year, Dr. Michael will give the report to his House of Delegates and Dr. Benoit will report to the MSMA House of Delegates.—*Referred to Resolutions Committee.*]

PRESIDENT-ELECT'S REMARKS

Dr. Miller briefly remarked about the possibility of setting up a President's Advisory Committee into the structure of the MSMA. He indicated that a good number of physicians are willing to dedicate themselves to deliberations of organized medicine and he felt that many of the younger, interested physicians would become involved in organized medicine if given the opportunity. He suggested that possibly five physicians and one individual from the ranks of students should make up this proposed Advisory Committee. The thought was that these physicians should be selected on a geographic basis, taking into consideration their aggressiveness; should be relatively young; and should cover the spectrum of medicine such as, surgery, medicine, family practice, ob-gyn, pediatrics, etc. Dr. Miller indicated that perhaps this group could sit without vote at Council

meetings. They might be asked to scrutinize the effectiveness of peer review and the effectiveness and capacity of our Commissions and report to the President so that he may report their observations to the Council.

In closing, Dr. Miller indicated that he would simply ask the Council for the privilege of having for this year, as a trial flight, an appointed President's Advisory Committee to be initiated into the structure.

On motion of Dr. Bradshaw, duly seconded by Dr. Chandler, it was moved that this privilege be granted.

NEXT COUNCIL MEETING

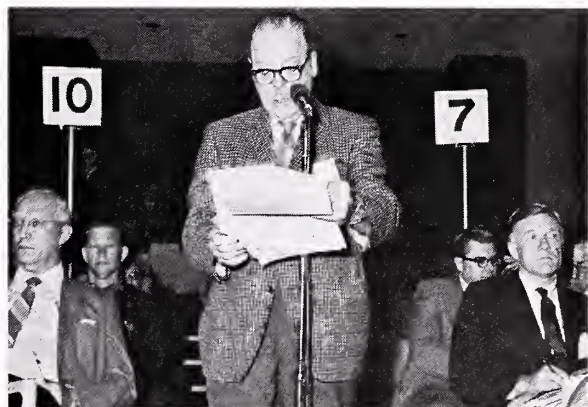
There being no further business, the Chairman adjourned the regular Council Meeting at 12:10 PM and called for a short Executive Session. He announced that the next meeting of the Council will be held at 6 P.M. on April 14 at the Chase Hotel in St. Louis.

Doctor Gunn then presented a supplementary report on the Council meeting held on Wednesday evening, April 14, 1971 prior to the opening of the Annual Session. He reported as follows:

"The Council met in the Park Room of the Chase-Park Plaza Hotel on Wednesday, April 14, 1971 at 7:30 PM with all but two members of the Council and Officers present, as well as a number of guests and staff.

"The Chairman requested approval of the Minutes of the Council Meeting of January 28, 30 as published in the Delegates Handbook. On motion, duly seconded, the minutes were approved as published.

"Mr. McIntyre reported that for the first time, a new program was being instituted in accordance with instructions from the 1970 House of Delegates regarding Orientation of the New Members and requested Bob Carroll to give a brief rundown on this program. Mr. Carroll stated that Dr. Troy Morgan of Albany was Chairman of the Ad Hoc Committee which was responsible for this new program which is to be held from 8:30 AM until 12 NOON on Thursday, April 15 in the Tiara Room of the Park Plaza Hotel. Approximately 35 preregistration cards were received and it is anticipated that a good number more will attend. This program was prepared under the supervision of the Public Affairs Commission.



Dr. Walter T. Gunn, St. Louis, Chairman of the MSMA Council for 1970-1971, presents the Council's supplementary report to the House of Delegates during the first session.

(The Speaker referred this portion of the report to the Reference Committee on Miscellaneous Affairs.)

"Mr. McIntyre then reported that on Saturday, April 17, we will have our General Luncheon with Representative Ichord being the featured speaker. At this meeting, we also plan to present to the Missouri medical schools the usual annual checks received from the AMA-ERF. This year, checks were received for all four medical schools in the state of Missouri and we have invited the Deans to attend the General Luncheon so that the checks may be officially presented at that time. It was pointed out that the AMA-ERF receives contributions and grants from various sources and each year the money is allotted to medical schools all over the country.

"Mr. McIntyre also stated that he had received a short letter from Senator Tom Eagleton expressing the hope that the MSMA Convention in St. Louis would be very successful.

"It was reported that a statewide Governor's Conference on Arthritis, sponsored principally by the Arthritis Foundation of the state of Missouri, will be held in Jefferson City at the Ramada Inn on May 7-9, 1971, and that anyone interested is invited to attend.

(The Speaker referred this portion of the report to the Reference Committee on Medical Education and Public Welfare.)

"The Chairman then called on Dr. Troy Morgan, Chairman of the Ad Hoc Committee on Medicine and Religion, to give a brief report to the Council. Dr. Morgan reported that for the past three years there has not been too much activity in this field, but he emphasized the need for combined treatment of both the spiritual and physical ills. He said that he had attended three meetings this year, two meetings in Chicago and one in Salt Lake City. A good interchange of ideas on medicine and religion was presented and was of interest to all physicians regardless of their particular religion. He stated that the State Committee should consist of at least five physicians from varying regional areas and from different backgrounds. Dr. Morgan said he would like to see the committee cosponsor programs with the American Cancer Society and the American Heart Association and other interested groups and encourage county medical societies and state auxiliaries to have area programs on this subject. On motion of Dr. Fisher, duly seconded, Dr. Morgan's report was accepted with commendation.

(The Speaker referred this portion of the report to the Reference Committee on Miscellaneous Affairs.)

"Dr. Kelley, Chairman of the Governor's Advisory Committee for Comprehensive Health Planning, gave a brief report of the activities of CHP in Missouri. He presented material to the Council regarding the Committee structure and suggestions for committee appointments. He stated also that very few practicing physicians are participating in CHP programs and urged that private practicing physicians become involved in this important project."

The Chairman thanked Dr. Kelley for his report and on motion, duly seconded, the report was accepted.

(The Speaker referred this portion of the report to the Reference Committee on Resolutions.)

"Dr. Finnegan gave a brief report of the Publication Committee, copies of which were distributed to the Council. He requested advice from the Council regarding accepting articles for publication from various groups which send in articles for publication in *MISSOURI MEDICINE*. On motion, duly seconded, it was agreed that material for publication in *MISSOURI MEDICINE* be left entirely to the discretion of the Publications Committee.

"Dr. Fisher moved that Dr. Finnegan be reappointed as Editor of *MISSOURI MEDICINE*. He was reappointed by unanimous vote.

"Discussion followed regarding appointment of Committee on Publication and Editorial Board of *MISSOURI MEDICINE*. Dr. Finnegan stated that the present Editorial Board and Publication Committee have done an excellent job and recommended to the Council that the present Editorial Board and Publication Committee be retained. On motion, duly seconded, the present Editorial Board and Publication Committee were reappointed.

"Dr. Ritter, Chairman of the Student Affairs Committee of the St. Louis Medical Society, stated the SAMA Convention will be held in St. Louis in May, 1971 and is in need of financial help. It was reported that the St. Louis Medical Society has agreed to contribute \$200. On motion of Dr. Miller, duly seconded, it was agreed that the Council authorize the expenditure of \$200 to the SAMA meeting in St. Louis for educational purposes.

(The Speaker referred this portion of the report to the Reference Committee on Reports of Officers.)

"Dr. Benoit reported that the Health Care Foundation had held an orientation meeting on March 28, with more than 100 persons invited. They included insurance carriers across the state, members of the Health Insurance Council, insurance management firms, labor unions, etc. The Foundation Board met later that afternoon and discussed the budget situation and basic charges, as well as setting up a formula as to charges, particularly the charge plus for services rendered. A meeting is planned with Mr. Carter of the Division of Welfare, Dr. Michaels of the Osteopathic Association and Dr. Matthews to discuss problems with the Medicaid office with the hope that the Division of Welfare will accept the cost-plus charges.

"Dr. Benoit presented a slate of nominees for the Judicial Council of the Health Care Foundation to be voted on by the Councilors. The following physicians were elected to the Judicial Committee: Dr. William Fleming, Moberly, three-year term representing Northeast Missouri; Dr. Walter Tillman, Springfield, representing Southwest Missouri, three-year term; Dr. Joseph Conrad, Chillicothe, representing Northwest Missouri, two-year term; Dr. David N. Kerr, St. Louis, representing St. Louis area, two-year term; Dr. Robert Forsythe, Kansas City, representing the Kansas City area, one-year term; and Dr. Arthur Parker, Poplar Bluff, representing Southeast Missouri, one-year term. On motion, duly seconded, the report of the Health Care Foundation was approved.

(The Speaker referred this portion of the report to the Reference Committee on Resolutions.)

"After general discussion by the Council regarding a Peer Review Workshop to be presented by the AMA

and the American Society of Internal Medicine on May 21-22 in Chicago, it was decided that it would be wise, from an educational standpoint, to have MSMA representatives attend this meeting. The Council was informed that the Missouri Osteopathic Organization had already approved expenses for two of its members to attend.

"On motion of Dr. Fisher, duly seconded, it was agreed the Council authorize sending of Dr. Gerald Miller, Dr. Jack Matthews and Dr. Rae Froelich to the Chicago workshop.

"Dr. Benoit stated that there is to be a meeting in Des Moines, Iowa on May 7-8 at which time Foundations for Medical Care will be discussed. The advisability of having MSMA representation at this meeting was discussed.

"On motion of Dr. Fisher, duly seconded, it was agreed that the Council authorize the incoming President, Dr. Miller, to appoint up to three representatives to attend the Des Moines meeting with expenses to be paid by MSMA.

(The Speaker referred this portion of the report to the Reference Committee on Reports of Officers.)

"In the absence of Dr. Donald Spencer, Chairman of the Ad Hoc Committee on Medical Aspects of Sports, the report of this Committee was presented by Bob Carroll. The Committee made the following recommendations to the Council of MSMA: (1) The Committee be made a permanent part of MSMA so that it may work continuously in this field and establish liaison with the Missouri State High School Athletic Association along with other interested groups; (2) Regional meetings be established in all sections of Missouri for physicians, coaches and trainers; and one segment of the 114th Annual Session of MSMA be devoted to the subject of Medical Aspects of Sports with the Committee taking the responsibility for the format and the program.

"On motion of Dr. Miller, duly seconded, the report of the Ad Hoc Committee on Medical Aspects of Sports was accepted with commendation.

"Dr. Matthews, Chairman of the Committee on Legislative Affairs, updated the Council regarding medical and health legislation currently in The General Assembly. A number of these bills are being closely followed and appropriate action is being taken where necessary under the direction of the Committee. He stressed the importance of the key man program and said that the positive stance concerning legislation by our organization has proved to be most beneficial. On motion, duly seconded, the report of the Committee on Legislative Affairs was accepted with commendation.

"A report of the Ad Hoc Committee on Environmental Health was given by the Chairman, Dr. Neilson. He indicated that a study on air pollution supported by the MSMA, St. Louis Medical Society and St. Louis County Medical Society is going forward following two meetings of the subcommittee on effects of air pollution on humans.

"He further reported that the MSMA Auxiliary has developed an effective environmental program for the women of the state. They will have a display in Booth # 19 at this meeting and Dr. Neilson urged all Councilors and officers to visit the display. The MSMA Auxiliary is also sponsoring a one-day program on environmental health on May 11 at Ramada Inn in Columbia.

The Missouri Federation of Women's Clubs has selected the Auxiliary package for their statewide program.

"Dr. Neilson indicated that he has been named to the Governor's Council Occupational Health and Safety Task Force and an initial meeting was held on March 17, in Jefferson City.

"Dr. Neilson stated that the Council on Environmental and Public Health of the AMA is presenting a Solid Waste Management Congress on April 26-27 in New York City, and he will attend.

"He stated that he had recently been appointed a member of the Missouri Conservation Commission's Citizens Committee which is undertaking an enlargement of the Commission following a study of the organization.

"The motion was made and seconded that the report of the Ad Hoc Committee on Environmental Health be accepted. Motion carried.

(The Speaker referred this portion of the report to the Reference Committee on Miscellaneous Affairs.)

"Mr. Noble, Legal Counsel, indicated that the State Board of Optometry versus Curteman case is now in the hands of the Supreme Court.

"Legal Counsel also discussed the matter dealing with IRS and unrelated business income regarding the Journal. He stated that a hearing was held on the district level and it was apparently decided by IRS that they should have additional information and guidelines. They have passed it on to the District Appeals Division and it has not as yet been set for a hearing, but it is felt that they are probably reevaluating it.

"Motion was made and seconded that the report of the Legal Counsel be accepted. Motion carried.

"Dr. Imes, Speaker of the MSMA House, indicated that all Reference Committees have been assigned and he urged all members attend these committee meetings and support whatever they are interested in and assist in the Committee hearings. Motion was made and seconded to accept the report of the Speaker. Motion carried.

(The Speaker referred this portion of the report to the Reference Committee on Reports of Officers.)

"Mr. Fox, in the absence of Dr. Paul Young, gave a brief progress report regarding the 1971 summer program for SAMA. He stated that, to date, ten programs have been drawn up jointly by the medical director and administrators of the hospitals. These ten programs involve 14 students. Guidelines of this program have been sent to all county society presidents and secretaries and to all hospitals across the state to keep them informed. Mr. Fox indicated that students enrolled in this program must have completed their freshman or sophomore year in medical school.

"Motion was made, seconded and carried that the report regarding the SAMA Medical Education Community Orientation 1971 Summer Job Program be accepted.

(The Speaker referred this portion of the report to the Reference Committee on Medical Education and Public Welfare.)

"Mr. McIntyre, in the absence of Dr. Kerr, gave a brief progress report of the Planning Committee regarding the study of the financial situation and other problems of the Association. A meeting of this Committee was

held with general discussion regarding financing methods, MSMA responsibility to its members in regard to continuing medical education, study of the effect of annual sessions on the staff and legislative program of the MSMA. Mr. McIntyre stated that no definitive recommendations were made. However, the Committee plans further study and a report back to the Council. On motion, duly seconded, the report of the Planning Committee was accepted.

"Dr. Martin requested that the Council restudy the present policy on presentation of 50-year pins to physicians who have been in practice for 50 years. The Chairman named a committee of three, Drs. Fisher, Miller and Martin, to study the present policy and make recommendations back to the Council regarding any necessary changes. The remaining Councilors reported the usual activities in their Districts as reported in the last meeting.

(The Speaker referred this portion of the report to the Reference Committee on Reports of Officers.)

"Dr. Petersen indicated that, in the next few days, he and members of his committee would be discussing with individual physicians and county society delegations the project under consideration for the negotiation of professional fees. He stated that this is a continuing effort on the basis of the resolution passed last year by the House of Delegates."

(The Speaker referred this portion of the report to the Reference Committee on Resolutions.)

"Mr. Speaker, that concludes the report."

On motion, duly seconded, the report was accepted.

The Speaker then referred the Council's resolution in the Delegate's Handbook urging continuation of the annual assessment for the Missouri State Medical Foundation to the Reference Committee on Constitution and By-Laws. The resolution is as follows:

Resolved, That the annual dues assessment of ten dollars (\$10) be continued for each active Missouri State Medical Association member and five dollars (\$5) for the dues of each junior member for the three-year period 1972, 1973, 1974, for the support of the Missouri State Medical Foundation. Accordingly, MSMA By-Laws, Chapter VIII, Section 1. (b) should be revised.

Introduction of New Business

Dr. Fisher named the following members to the Committee on Nominations: Drs. E. E. Wadlow, Charles Lewellen, Larry O'Neal, Falls Hershey, Hugh Stephenson, Robert MacGee, Jack Stelmach, Robert Mayer, Jack Bass and T. Eugene Ruff.

The Speaker invited the introduction of new business.

The Speaker noted that since Resolutions #1, #2, #3, #4, #5 and #6 had been submitted to the Council and were included in the Delegates Handbook, their introduction from the floor was not required. These resolutions are as follows:

A resolution had been submitted by Mineral Area Medical Society.

Resolution #1—Required Membership on Hospital Staffs

WHEREAS, The responsibility for the determinations of the qualifications of the members of the medical staff legally, professionally, ethically and morally, has been traditionally vested in

the fellow members, associations and peers of that same medical staff; and

WHEREAS, The House of Delegates of the American Medical Association has formally recognized (December, 1964) the necessity for hospital staff organization and membership; and

WHEREAS, The requirements of the State Hospital Licensing Laws (Chapter 197, RSMo. 1959, Section IV, Regulation No. 1, Code 11, Code 13) CLEARLY CHARGE THESE SAME INDIVIDUALS AND FELLOW ASSOCIATES WITH THE SAME DUTIES; and

WHEREAS, The conditions of participation for hospitals, federal health insurance for the aged, known as "Medicare," further places the obligation for the proper screening and prior approval before appointment to the medical staff upon these same associates, fellows, and peers (Regulation 405.1023 (a)(2); (D)(d)(1); (e)(1); (e)(3); (f)(1)(2); (iii); and

WHEREAS, The courts have recently reversed and overruled the findings of these associates in certain institutions, primarily county hospitals; and

WHEREAS, The overruling of the disciplinary functions, recommendations and actions of the medical staff and, through them, the ultimate rulings of the governing board have affected these same institutions by placing them in positions of noncompliance because of such reversals of the normal and required rules and regulations; and

WHEREAS, The positions of noncompliance have placed these same hospitals in jeopardy by loss of federal funds and license revocation and possible closure; and

WHEREAS, Such closure directly affects the health and welfare of the citizens of those communities; therefore, be it

Resolved, That the Missouri State Medical Association does hereby affirm that all physicians treating patients in a hospital should be members of the medical staff of that hospital; and, be it further

Resolved, That the Missouri State Medical Association, through all appropriate mechanisms, supports the modification of Attorney General rulings and the passage of such legislation as would require this staff membership in order to use the facilities of any hospital in this State to treat patients.

(Referred to Reference Committee on Miscellaneous Affairs.)

A resolution had been submitted by St. Louis Medical Society.

Resolution #2—New Regulations for Chiropractors

WHEREAS, Chiropractic purports to be a method in the diagnosis and treatment of human disease and therefore is the practice of medicine; and

WHEREAS, A bill introduced in the Missouri State Legislature (House Bill 79) proposes to extend chiropractic to allow use of any physical, chemical, electrical, thermal or x-ray method for diagnosis and proposes that chiropractors be allowed to administer physiotherapy, manual, mechanical, electrical and other treatment; and

WHEREAS, This statute would eliminate previous limitations placed on chiropractic by the Chiropractic Act; and

WHEREAS, These previous limitations were necessary in order to protect the consumer of services; and

WHEREAS, The purpose of the State Board of Registration for the Healing Arts is "to license and regulate the practice of medicine in Missouri," therefore be it

Resolved, That the MSMA encourage the Legislature of the State of Missouri to bring chiropractic under the regulation of the State Board of Registration for the Healing Arts, and to require applicants for licensure to present a diploma from a school approved by the State Board of Registration for the Healing Arts, and to take the same examination required by all medical practitioners in the State of Missouri.

(Referred to Reference Committee on Miscellaneous Affairs.)

A resolution had been submitted by Clay County Medical Society.

Resolution #3—Retention of Private Health Care System

WHEREAS, Private health insurance carriers presently cover more than 85% of the over-65 population and more than 80% of the remainder of the population of the United States; and

WHEREAS, These private carriers have demonstrated concern for the public welfare through study and consistent improvement in the quality and coverage they offer and through their increasing concern and activities in the areas of quality and cost control; and

WHEREAS, Private carriers, including Blue Cross and Blue Shield, functioning under the traditionally competitive American principle of competitive free enterprise, can be successful only through efficient administration and effective utilization review, thus providing maximum coverage at minimum cost to the American public; now, therefore, be it

Resolved, That the House of Delegates of the Missouri State Medical Association go on record as favoring the retention of the present system of private health insurance carriers, functioning in competitive free enterprise, in any larger scheme of national health insurance; and be it further

Resolved, That any scheme of national health insurance incorporate the principle of the minimal standards of benefit with cost to be shared by employers and employees; and, be it further

Resolved, That premiums for the medically indigent be paid directly to carriers by the government; and, be it finally

Resolved, That such carriers be required to meet established performance standards in the public welfare.

(Referred to Reference Committee on Resolutions.)

A second resolution had been submitted by Clay County Medical Society.

Resolution #4—Third Party Carriers Notification of Practices Concerning Fees

WHEREAS, The Private Health Insurance Industry currently insures approximately 80% of the American population; and

WHEREAS, Fee schedules by private carriers in many instances are not coincident with physicians charges for such services; and

WHEREAS, A judgment on the value of a medical service can, in most instances, not be made a third party insurance carrier; and

WHEREAS, Many third party carriers are making a common practice of notifying the insured that the physician's fee was beyond the usual and customary fee for such a service; and

WHEREAS, Such a notification to the insured is not coincident with the truth, in most instances, and places the physician in an unfavorable light with his patient; and

WHEREAS, The reason for such notification inevitably is the result of either inadequate insurance or a self-serving motive on the part of the insurance company; now, be it therefore

Resolved, By the House of Delegates of the Missouri State Medical Association to soundly condemn this practice by private insurance carriers and urge the members of the Missouri State Medical Association not to cooperate in any way with insurance companies engaging in such a practice in reviewing problems relating to fees until such practice is stopped; and, be it finally

Resolved, That all private insurance companies be advised that appropriate medical fee review mechanisms have been established and that problems in this area should be handled through these channels.

(Referred to Reference Committee on Resolutions.)

A third resolution had been introduced by Clay County Medical Society.

Resolution #5—Immunity for Peer Review Physicians

WHEREAS, The practice of medicine is a profession logically subject to self-discipline; and

WHEREAS, There is evidence of an increasing tendency on the part of the public to enter into legal action against physicians; and

WHEREAS, The necessary function of peer review is inevitably hampered by natural concern about the possibility of such legal action; now, therefore, be it

Resolved, That the House of Delegates of the Missouri State Medical Association sponsor legislation to effect immunity to suit on behalf of any physician functioning in a duly constituted peer review capacity, inasmuch as these actions lie within the realm of proper discharge of such responsibilities.

(Referred to Reference Committee on Miscellaneous Affairs.)

Another resolution had been submitted by Clay County Medical Society.

Resolution #6—Medical Examiner System for Missouri

WHEREAS, The various counties of Missouri are suffering from lack of funds for the scientific investigation of causes and circumstances of unexplained death; and

WHEREAS, The availability of expert examiners is often limited to urban areas through lack of proper statewide organization or resources; and

WHEREAS, Diseases endangering the health of the community may go undetected; and

WHEREAS, Deaths from criminal acts including homicide may go undetected; and

WHEREAS, Deaths by accident or suicide may go undetected or be misinterpreted as homicide causing pain and travail to innocent persons; therefore, be it

Resolved, That the House of Delegates of the Missouri State

Medical Association go on record as strongly endorsing the establishment of a statewide medical examiner system by appropriate legislation; and be it further

Resolved, That the Medical-Legal Committee and the Legislative Committee of the Missouri State Medical Association be instructed to draw up and seek sponsors for a medical examiner act to be introduced at the next regular session of the legislature.

(Referred to Reference Committee on Miscellaneous Affairs.)

Dr. John H. Mayer, Jr., introduced a resolution from the Jackson County Medical Society.

Resolution #7—Blue Shield of Kansas City

WHEREAS, The primary objectives of Blue Shield are to offer the public an economical and efficient method of paying for medical and surgical services, and, at the same time, to protect the legitimate interests of physicians who are providing such services; and

WHEREAS, Blue Shield of Kansas City, under the sponsorship of 17 component medical societies, has attempted to accomplish such objectives since its founding in 1943; and

WHEREAS, The medical profession, through its medical society representation on the governing bodies of Blue Shield of Kansas City, can change at any time the structure, policies and/or programs of the Kansas City plan; and

WHEREAS, Blue Shield of Kansas City has no formal relationship with or responsibility to the Missouri State Medical Association; therefore, be it

Resolved, That the report and recommendations of the Missouri State Medical Association's ad hoc Blue Shield Committee be forwarded to Blue Shield of Kansas City for information only; and be it further

Resolved, That the Missouri State Medical Association recognizes Blue Shield of Kansas City as an organization which truly reflects the philosophy and wishes of the medical profession of the geographic area which it serves; and be it finally

Resolved, That the Missouri State Medical Association commends Blue Shield of Kansas City for its national leadership in developing and implementing a broad comprehensive benefit plan for both group and non-group subscribers.

(Referred to the Reference Committee on Resolutions.)

Dr. Max Franklin, St. Louis, introduced a resolution.

Resolution #8—Past-Presidents to Be Delegates-at-Large

WHEREAS, The MSMA has been blessed each year with an excellent, knowledgeable and astute President; and

WHEREAS, The MSMA has now accumulated a number of Past-Presidents; and

WHEREAS, The knowledge, wisdom and experience of these Past-Presidents have not been utilized as much as they should be; therefore be it

Resolved, That the Constitution (Article IV) and the By-laws of MSMA be amended as follows:

"By-Laws, Sec. 2 (a). All Past-Presidents of the Association shall be Delegates-at-Large to the House of Delegates with all the rights and privileges of Delegate members."

(Referred to Reference Committee on Constitution and By-Laws.)

Dr. Andrew McCause introduced a resolution from Jackson County Medical Society.

Resolution #9—Health Care Foundation of Missouri

WHEREAS, The House of Delegates of the Missouri State Medical Association, meeting in Annual Session in 1970, directed the Council of the Missouri State Medical Association to "implement the proposed peer review procedure with expediency"; and

WHEREAS, The need for peer review, of physicians and by physicians to control the cost and quality of medical care, is recognized fully by all levels of organized medicine; and

WHEREAS, Only physicians can properly perform valid professional review of medical and surgical practices and procedures; and

WHEREAS, Socio-economic and political pressures are going to lead inevitably to some form of review of the physician's professional performance; and

WHEREAS, The Health Care Foundation of Missouri has been established and is functioning to provide true peer review in accord with the basic concepts of professionalism and in the best interests of our patients; therefore, be it

Resolved, That the House of Delegates of the Missouri State Medical Association commends the Council for Planning and establishing the Health Care Foundation of Missouri; and be it further

Resolved, That the House of Delegates, herewith, certifies to

its unqualified endorsement of the Health Care Foundation of Missouri and urges all members of the Missouri State Medical Association to give their support and cooperation to said Foundation.

(Referred to Reference Committee on Resolutions.)

Dr. T. Eugene Ruff introduced a resolution from Butler-Wayne-Ripley County Medical Society.

Resolution #10—Drug Abuse

WHEREAS, Drug Abuse is one of America's medical problems; and

WHEREAS, Amphetamines and amphetamine-like drugs are abused; and

WHEREAS, This group of drugs are manufactured for medical use; and

WHEREAS, Medicine can practice without their use; be it

Resolved, That the MSMA goes on record asking that the manufacture of these drugs be stopped; and be it further

Resolved, That this resolution be brought to the AMA.

(Referred to Reference Committee on Medical Education and Public Welfare.)

Dr. Lawrence O'Neal introduced a resolution from St. Louis Medical Society.

Resolution #11—Health Care for the Poor

WHEREAS, Food and prescription drugs are necessities; and
WHEREAS, Taking food and drugs effects a particular hardship on the poor and on many working families; and

WHEREAS, A sales tax of 3% amounts to 11 days of a person's annual food bill, and a sales tax of 4% amounts to 14½ days of an annual food bill; therefore be it

Resolved, That the MSMA recommend to the Missouri State Legislature that it implement ways of reducing or abolishing sales tax on retail food and prescription drugs.

(Referred to Reference Committee on Miscellaneous Affairs.)

Dr. Allen Klippel introduced a resolution from the Joint Emergency Medical Services Committee of the St. Louis City and St. Louis County Medical Societies.

Resolution #12—Drunk Driver Test

WHEREAS, We, as physicians, must concern ourselves with preventing disease and injury as well as treating these conditions; and
WHEREAS, Automobile drivers under the influence of alcohol contribute heavily to deaths and injuries on the highways of the State of Missouri; and

WHEREAS, The state legislature is now considering a bill to change the legal definition of a drunk driver from 0.15 gms per 100 ml of blood to 0.10 gms per 100 ml of blood; now, be it

Resolved, That the Missouri State Medical Association goes on record in favor of changing the blood alcohol definition of intoxication per 100 ml of blood to 0.10 gm; and be it further

Resolved, That a copy of this resolution be sent to every member of the legislature of this state; and be it further

Resolved, That if this legislation fails, the members of the Missouri State Medical Association will pledge to help circulate initiative petitions to allow the people of this state to vote concerning the problem of the drunk driver.

(Referred to Reference Committee on Miscellaneous Affairs.)

Dr. Roy E. Kenney introduced a resolution from Ozarks Medical Society.

Resolution #13—Method of Reimbursement to Hospitals by Blue Cross

WHEREAS, The cost of medical care continues to be a source of public concern; and

WHEREAS, Physicians fees and hospital costs are included together in consideration of medical costs; and

WHEREAS, The major increment of these medical costs has been associated with the expense of hospitalization; and

WHEREAS, Blue Cross is the single largest insurer for medical care; and

WHEREAS, The method of reimbursement to hospitals by Blue Cross has been assigned a major role in this increase in hospitalization costs, and Blue Cross has been accused by many of being a major contributing factor to the increase in use of hospital facilities; therefore, be it

Resolved, That the Council of the Missouri State Medical Association be instructed to study and evaluate the method of reimbursement of hospitals by the Blue Cross Association and determine the role of Blue Cross in contributing to the increase of hospitalization expense and make this information known to the members of the Missouri State Medical Association and to the general public as a whole.

(Referred to Reference Committee on Resolutions.)

Dr. William Leo introduced a resolution from Jackson County Medical Society.

Resolution #14—Subscriber Representation on Blue Shield Boards

WHEREAS, The basic concept of Blue Shield presupposes a cooperative effort or partnership between participating members of Blue Shield (physicians) and Blue Shield subscribers (patients); and

WHEREAS, Subscribers should be and have been represented in varying degrees on the governing bodies of Blue Shield Plans; and

WHEREAS, The National Association of Blue Shield Plans has officially called upon individual Plans to assure subscribers of at least 40% representation on their governing boards; therefore, be it

Resolved, That the Missouri State Medical Association encourage the Blue Shield Plans in Missouri to provide for adequate and effective subscriber representation on their governing boards, with such representatives to be selected without interference or influence by physicians or medical organizations; and be it further

Resolved, That the Missouri State Medical Association does not approve the recommendations of the Association's ad hoc Blue Shield Committee relating to the selection of subscriber members of Blue Shield governing boards (found in Paragraph B, Section 1 on page 2 and in Paragraph A, Section 11 on Page 3 of the Committee's report).

(Referred to Reference Committee on Resolutions.)

Dr. Falls Hershey introduced two resolutions from St. Louis County Medical Society.

Resolution #15—Peer Review

Be It Resolved, That the Missouri State Medical Association wholeheartedly supports "Peer Review" to improve the quality of patient care, but we abhor "Peer Review" to ration medical care and to punish physicians who do not acquiesce in government rationing. The Missouri State Medical Association is concerned that Americans may be deprived of their right to have their medical needs decided by their own doctor.

(Referred to Reference Committee on Resolutions.)

Resolution #16—Use of Referendum

WHEREAS, Missouri State Medical Association policies and actions should be guided by the will of the majority of its members; and

WHEREAS, The members have the right to convenient orderly processes to amend the Constitution or By-Laws and to vote on issues before the Council or House of Delegates; and

WHEREAS, Pressing issues cannot always await the annual meetings; and

WHEREAS, The officers, Council and Delegates wish to develop interest, insure loyalty and increase participation of the members in the affairs of the Association; and

WHEREAS, Provisions for a referendum of the general membership in Article 9 of the Constitution are unduly restrictive; now, therefore, be it

Resolved, That Article 9 of the Constitution of this Association be amended by adding thereto after the end of the second sentence of said article the following:

"Petitions signed by 400 members, or by councilors from three districts, or by 25% of the delegates at the last annual meeting shall initiate a referendum regarding changes in the Constitution or By-laws or questions before the House of Delegates or Council."

So that the amended Article 9 in its entirety will read as follows:

At any General Meeting of the Association, it may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates. The House of Delegates may, by a vote of its members, submit any question to the membership of the Association for its vote.

Petitions signed by 400 members, or by councilors from three districts, or by 25% of the delegates at the last annual meeting will initiate a referendum regarding changes in the Constitution or By-laws or questions before the House of Delegates or Council.

A majority vote of all members of the Association shall determine the question.

(Referred to Reference Committee on Constitution and By-Laws.)

Dr. Hershey introduced the following resolution for St. Louis Medical Society, St. Louis County Medical Society and the Committee on Medical Staffs.

Resolution #17—Abolish Dues for Junior Members

WHEREAS, It is usually financially difficult for doctors to enter active private practice; and

WHEREAS, It is in the best interest of both patient and doctor for the number of doctors in private practice to be increased; and

WHEREAS, The state of Missouri would be better served if it could increase the number of doctors in active private practice; now, therefore, be it

Resolved, That the St. Louis County Medical Society urges the Missouri State Medical Association to amend Chapter VIII, Section 1 (a) by deleting the words "the per capita levy for junior members shall be one-half of the per capita levy for active members" and add the word "Junior" to the next phrase of the section; and be it further

Resolved, That in Chapter VIII, Section 1 (b) that the words "and \$5.00 per year on each junior member" be deleted.

(Referred to Reference Committee on Constitution and By-Laws.)

Dr. William B. Rost introduced a resolution from Buchanan County Medical Society.

Resolution #18—Peer Review

WHEREAS, With the growth of the Medicare program and the government's directives pertaining thereto, it is becoming more apparent that some form of Peer Review will very soon become mandatory by federal order; and

WHEREAS, Within the MSMA organization there has been developed, within the past year, the Health Care Foundation of Missouri, which was founded, funded and organized to provide the services of Peer Review in Missouri; and

WHEREAS, It is more desirable to operate our own program than to have the government thrust a program upon us; therefore, be it

Resolved, That the House of Delegates of the MSMA goes on record as endorsing and supporting the implementation of the Peer Review Program as set up within the Health Care Foundation of Missouri.

(Referred to the Standing Committee on Resolutions.)

Dr. Robert Royce introduced two resolutions from St. Louis Medical Society.

Resolution #19—Problems in Discharging Hospital Patients

WHEREAS, Patients on occasion are unwilling or unable to participate in their discharge from a hospital; and

WHEREAS, The patient's family may be unavailable or unwilling to participate in discharge plans; and

WHEREAS, Undue delay in discharge may result in improper utilization of hospital facilities and the incursion of expense on the part of the patient, patient's family and/or the hospital; and

WHEREAS, The physician has no legal authority to enforce the discharge of a patient; therefore, be it

Resolved, That the Missouri State Medical Association enlist the assistance of the Hospital Association, Bar Association, the courts and other interested parties to find an appropriate solution.

(Referred to the Reference Committee on Miscellaneous Affairs.)

Resolution #20—Outpatient Medicare Coverage of Patients with Emotional Problems

WHEREAS, Medicare provides coverage of 80% of outpatient non-psychiatric care without an annual limitation; and

WHEREAS, Medicare provides for 80% of 62½% of outpatient psychiatric care with an annual limitation of \$500; and

WHEREAS, This policy is inconsistent with good psychiatric practice; and

WHEREAS, This represents discrimination against the patient with emotional problems; therefore, be it

Resolved, That the Missouri State Medical Association takes appropriate steps to correct the inequity.

(Referred to Reference Committee on Resolutions.)

Dr. Charles Jost introduced two resolutions.

Resolution #21—Right to Life

WHEREAS, It is the consensus of authorities on biology, embryology and the related medical sciences that human life begins with conception; and

WHEREAS, It is the proper role of government and the medical profession to protect human life; therefore, be it

Resolved, That the Missouri State Medical Association urges the legislature of the State of Missouri to allow the people to vote on changing the Constitution of the State of Missouri by adding the words "from the moment of conception" immediately after the word "persons" in Section 2, Article 1 so it will read: "all persons, from the moment of conception, have the natural right to life, liberty, the pursuit of happiness and the enjoyment of the gains of their own industry."

(Referred to Reference Committee on Miscellaneous Affairs.)

Resolution #22—Health Care Foundation of Missouri

WHEREAS, The primary function of the Health Care Foundation is to protect the interest of the political organizations which purport to provide medical care for the poor and medical payments for the care of the aged; and

WHEREAS, The operation of this Foundation can only mediate against the interest of the patient and/or the physician; and

WHEREAS, Any attempt on the part of the Health Care Foundation to favor the physician or the patient is sure to result in personnel changes which will bring decisions in line with the desires of the politicians; and

WHEREAS, The operation of a socialist system of medicine is almost impossible unless aided by an organization like the Health Care Foundation; and

WHEREAS, The private practice of medicine will be made more difficult by the operation of the Health Care Foundation; and

WHEREAS, Historically, the socialization of medicine has lowered the quality of medical care; and

WHEREAS, The welfare of the patient has been and should be the primary concern of the Missouri State Medical Association; therefore, be it

Resolved, That the Missouri State Medical Association does not approve of protecting the interest of political medical procurers against the interests of patients and physicians and, specifically, does not approve the Health Care Foundation of Missouri; and be it further

Resolved, That the Council of the Missouri State Medical Association be instructed to withdraw all support from the Health Care Foundation of Missouri; and be it further

Resolved, That the Missouri State Medical Association delegates to the American Medical Association be instructed to present this resolution to the Council of the AMA and to the annual meeting of the House of Delegates; and be it further

Resolved, That copies of this resolution be sent to the President of the United States, the Secretary of HEW, Governor Hearnes, Senator Symington, Senator Eagleton, the Missouri members of the House of Representatives, with the declaration that the Missouri State Medical Association is going to fight the socialization of medical practice because it is bad medical practice.

(Referred to Reference Committee on Resolutions.)

Dr. Joseph Edwards introduced the following resolution:

Resolution #23—Noise Control

WHEREAS, More persons become deaf as a result of industrial noise than for any other reason; and

WHEREAS, Between 20% and 25% of all industrial workers between 20 and 70 years of age are gradually losing their hearing; and

WHEREAS, About 5% of workers in noisy plants in the United States are provided with protective devices against noise; and

WHEREAS, Industry will not have the incentive to provide protective devices for reducing the causes of noise unless monetary compensation for tax benefits are enough to make it agreeable or in line with those that exist in other states; therefore be it

Resolved, That the Missouri State Medical Association goes on record as favoring a revision of certain provisions of the Missouri Workmen's Compensation Act which pertains to hearing loss; and furthermore, be it

Resolved, That the Missouri State Medical Association House of Delegates authorizes the Missouri State Medical Association to send a copy of this resolution to each member of the State Legislature's Committee on Workmen's Compensation and also to send these to the appropriate members of the United States Congress.

(Referred to Reference Committee on Medical Education and Public Welfare.)

Dr. James Brown introduced a resolution from Greene County Medical Society.

Resolution #24—Public Labeling of Prescription Drugs

WHEREAS, In group practice and in partnerships and when "covering" for an associate, it is often necessary to prescribe for another physician's patient, it is therefore imperative to know what previous medications have been prescribed; and

WHEREAS, The continuing education of patients in regard to the medication they take is a worthy goal; and

WHEREAS, The circumstances under which a physician might not wish his patient to know what manner of medication he was prescribing would be expected to occur only very infrequently; now, therefore, be it

Resolved, That all prescription drugs dispensed be labeled as to name and dosage, unless specifically indicated to the contrary by the attending physician.

(Referred to the Reference Committee on Miscellaneous Affairs.)

Dr. O. W. Cook introduced a resolution from Pemiscot County Medical Society.

Resolution #25—Use of Licensed Practical Nurses to Administer Intravenous Fluids

WHEREAS, The opinion of the Attorney General, Thomas F. Eagleton, in 1963 stated that intravenous fluids were to be administered by the registered professional nurse; and

WHEREAS, It was his further opinion that "practical nurses" are not authorized by law to administer fluids intravenously; and

WHEREAS, At the current time and under the current level of availability of registered nurse personnel and the difficulty in obtaining same, it has become necessary to utilize licensed practical nurses and train them on a more intensive basis than before, their breadth of responsibility in obstetrics and on medical and surgical floors is wider than was ever anticipated in 1963. At the present time, it is felt that rather than less responsibility, these individuals have more responsibilities in the future. In our area, the ratio of licensed practical nurses to registered nurses is four to one. These individuals are basis nurse personnel, and, of course, we have great confidence in them. Because of the breadth of their responsibility and the recent improvements in their training program, we feel that they, by training and necessity, are now qualified to administer what medications, fluids, etc., as are ordered by the doctor without violation of law; and

WHEREAS, An opinion of Assistant Attorney General John C. Klaffenbach recommends any change to accommodate present circumstances be by legislative action, as handed down on April 2, 1971; now, be it therefore

Resolved, That licensed practical nurses who have passed all the qualifications of their State Board Examinations and who have further passed the qualifications of the local hospital staff be permitted to administer fluids intravenously under the staff doctors' supervision and orders; and be it further

Resolved, That the legislative body of Missouri amend the law to make this possible.

(Referred to the Committee on Medical Education and Public Welfare.)

Dr. R. Bruce McCloskey introduced a resolution on behalf of the Committee of Hospital Staffs sponsored by both the St. Louis City and County Medical Societies.

Resolution #26—Article IX, Constitution and By-Laws

WHEREAS, Article IX of the Constitution of the Missouri State Medical Association provides that any question pending before the House of Delegates may be submitted by referendum to the general membership by a two-thirds (2/3) vote of the House of Delegates; and

WHEREAS, This section for all practical purposes deprives the individual members from expressing their opinions and intentions, particularly as to amendments to the Constitution and By-laws; and

WHEREAS, The right to amend and change by orderly process is an inherent democratic right that should be enjoyed by all and not be centered solely in any one group of delegates; and

WHEREAS, To correct this inequity and to give every member of this Association the opportunity to amend and change the Constitution and By-laws and to vote on any question pending before the House of Delegates, the following resolution is hereby proposed; be it

Resolved, That Article IX of the Constitution of this Associa-

tion be amended by adding thereto after the end of the second sentence of said Article the following:

"Any member or group of members who have secured the endorsement of six percent (6%) of the general membership may propose a referendum as to any change or amendment to the Constitution or By-laws of this organization on any question, or any question pending before the House of Delegates."

So that the amended Article IX in its entirety will read as follows:

"At any general meeting of the Association, it may, by a two-thirds (2/3) vote, order a general referendum upon any question pending before the House of Delegates. The House of Delegates may by a vote of its members submit any question to the membership of the Association for its vote. Any member or group of members who have secured the endorsement of six percent (6%) of the general membership may propose a referendum as to any change or amendment to the Constitution or By-laws of this organization on any question pending or not pending before the House of Delegates. A majority vote of all members of the Association responding by mail ballot or other devised means shall determine the question."

(Referred to the Reference Committee on Constitution and By-laws.)

Dr. McCloskey introduced a second resolution.

Resolution #27—Health Care Foundation of Missouri

WHEREAS, The producers of medical care, through the private practice of medicine, are currently beset by multitudes of legislative proposals for federal control of medical care; and

WHEREAS, The essential and constant component of the various plans is a quasi-legal organization to enforce compliance to the plan; and

WHEREAS, Only doctors can competently judge the functioning of other doctors through a system of "peer review"; and

WHEREAS, Desirable results of peer review are improved patient care through mutual education from study of care given; and

WHEREAS, Such peer review mechanisms now exist in the form of:

1. Medical Audits
2. Tissue Committees
3. Utilization Committees
4. Ethics Committees
5. Grievance Committees
6. Boards of Healing Arts, among others; and

WHEREAS, On page 15 of the Delegates Handbook for the 113th Annual Session of the Missouri State Medical Association under "Council Minutes," the Health Care Foundation of Missouri contemplates including "the Blues, representatives of the Health Insurance Council, state and federal representatives, labor, management and consumers," thus making it no longer peer review; and

WHEREAS, The Health Care Foundation of Missouri proposes they enter into the evaluation and inspection in:

1. Physicians' offices
2. Neighborhood health centers
3. Hospitals
4. Extended Care Facilities
5. Nursing Homes; and

WHEREAS, This all-pervasive, enormously personal review shows a flow sheet as follows:

1. Coordinating Committees
2. Regional Peer Review Mechanisms
3. Judicial Committees (which include two members of the Board of Healing Arts)
4. Attorney General; and

WHEREAS, Such a flow sheet establishes a truly enormous power potential of revoking licenses to practice and fines or jail sentences; and

WHEREAS, Such an overwhelming power structure would be held in the hands of so few; and

WHEREAS, Such a tightly-organized structure could most conveniently be preempted by a federal plan; and

WHEREAS, This enormous power structure has been formed and implemented by an ad hoc committee in the almost total ignorance of the membership as a whole; and

WHEREAS, We feel a matter of such overwhelming importance to all practitioners of medicine and with the possibility of invasion of doctor-patient relationships should be contemplated only after deep study and considered deliberation, especially with thorough and complete information and consultation with the entire membership; therefore, be it

Resolved, That the Health Care Foundation of Missouri be ordered to cease to function for one year; and be it further

Resolved, That all the committees of the Health Care Foundation of Missouri cease to function for one year; and be it further

Resolved, That the Missouri State Medical Society withholds all funding for one year; and be it further

Resolved, That the State Society undertakes a vigorous and effective informational program to enlighten the membership regarding the Health Care Foundation of Missouri and that their enlightened and considered judgment be sought by referendum prior to the next annual meeting of the Missouri State Medical Association; and be it further

Resolved, That the Health Care Foundation of Missouri be considered at the 1972 convention of the Missouri State Medical Association under old business and its status established in light of the response of the membership.

(Referred to Reference Committee on Resolutions.)

Dr. G. Robert Bowles, St. Louis County, introduced the following resolution:

Resolution #28—Comprehensive Health Planning

WHEREAS, The Missouri State Medical Association endorses the concept of comprehensive health planning involving provider and consumer, he it

Resolved, That such planning agencies must actively involve the Missouri State Medical Association and its membership as experienced providers of health care at all levels of such planning; and he it further

Resolved, That such planning must be on a regional basis to evaluate such needs and facilities in order to successfully provide for the health care of the people. It is further directed that copies of this resolution be sent to all concerned planning agencies at the local, state, regional and national level.

(Referred to Reference Committee on Resolutions.)

Dr. William M. Komanetsky of St. Louis presented the following resolution:

Resolution #29—Health Care Foundation of Missouri

WHEREAS, Effective peer review is in and has been in effect for years in the state of Missouri; and

WHEREAS, Most of the practicing physicians are not aware of the conception, birth and implementation of the Health Care Foundation of Missouri; and

WHEREAS, This organization, as implemented, is not accountable to the members of the Missouri State Medical Association; therefore, he it

Resolved, That the Missouri State Medical Association ceases the funding and continued operation of the Health Care Foundation of Missouri; and he it

Resolved, That a committee made up of representatives of all medical societies be elected by those societies to study the Health Care Foundation, its pertinent function and its need to the private practice of medicine; and he it further

Resolved, That this committee report to the House of Delegates at the 1972 annual session; and he it further

Resolved, That this information pertaining to the Health Care Foundation of Missouri be disseminated to all members of the Missouri State Medical Association for study and a referendum of the members of the MSMA be undertaken; and he it finally

Resolved, That if this is not done as stated above, the Health Care Foundation as a potential active organization affecting the Private Practice of Medicine will cease to exist immediately after the 1972 Missouri State Medical Association annual meeting.

(Referred to the Reference Committee on Resolutions.)

At this time, Dr. Komanetsky introduced a second resolution regarding the Health Care Foundation of Missouri. After two Delegates rose to a point of privilege requesting that the resolution not be accepted or be withdrawn, the Speaker requested that Dr. Komanetsky remove all personal reference to individuals from the resolution and resubmit it at the session of the House of Delegates on Friday for assignment to a reference committee. Dr. Komanetsky agreed to do so.

He then introduced another resolution.

Resolution #30—Medicaid Peer Review

WHEREAS, All communication with Rae Froelich of Lebanon, Mo., with the Board of Directors of the Missouri Academy of General Practice centered on establishment of a peer review as it pertained to Medicaid in Missouri; and

WHEREAS, In all other communications, verbal and written, especially on page 472 of the minutes of the Annual Session of 1970 under the title of Ad Hoc Peer Review Committee report at the bottom of the page, the last sentence reading: "2. Assign responsibility for Medicaid peer review cases to an appropriate number of committees geographically situated, etc."; and

WHEREAS, Nowhere thereafter was permission granted to delete the word Medicaid from the phrase "Medicaid Peer Review"; and

WHEREAS, On page 500 of the same journal under Peer Review, no mention was made or no permission was given by the

House of Delegates to strike out the word MEDICAID; therefore, he it

Resolved, That the ad hoc committee and the Council on April 5, 1970 acted hastily and without regard for the House of Delegates' intentions by omitting the word MEDICAID from the term Medicaid Peer Review when establishing this peer review mechanism; and he it

Resolved, That the Council and the Board of Directors of the MSMA should have been responsible to the House of Delegates and general membership by presenting the finished product for their inspection, examination and, perhaps a chance to change this mechanism; and he it

Resolved, That the primary intent of the House of Delegates of April, 1970 he honored by retaining the word Medicaid when speaking of the peer review mechanism established.

(Referred to Reference Committee on Resolutions.)

Dr. Komanetsky introduced a third resolution.

Resolution #31—Regarding Mrs. Norris Allen

WHEREAS, The St. Louis City Medical Society has been fortunate to have an attorney who is not only a friend of the medical profession (not only of those doctors in the St. Louis area but throughout the State of Missouri and the United States); and

WHEREAS, His father was a physician of renown in this locality; and

WHEREAS, He has defended malpractice suits in favor of the medical profession of Missouri totaling more than 1,000; and

WHEREAS, He has served the St. Louis City Medical Society for 25 years more or less without compensation or desire for compensation; and

WHEREAS, He is a renowned defendant's attorney representing the Medical Protective of Fort Wayne, Indiana which has defended more doctors than all other insurance companies totally in this country, about 96,000; and

WHEREAS, Their statistics show that causes, the results and the burdens placed on physicians by more controlling factors over the practice of medicine is unnecessary; and

WHEREAS, He has made an in-depth study of peer review mechanisms from material which was available anywhere as of April 14, 1971; and

WHEREAS, He represents the American Academy of General Practice on disability insurance, which has a total of 30,000 doctor members; and

WHEREAS, He has been retained for advice by the Committee of Medical Staffs of the Greater St. Louis area, which represents 16 general hospital staffs, without wish of personal gain or compensation; therefore, he it

Resolved, That Mr. Norris Allen, attorney, who has just given a lecture to our new members at 11 AM on April 15, 1971, be asked to appear before the House of Delegates to share his most valued experience and expertise in the matters of medical legislation, controls and the dangers of new pending or effectual legislation emanating from the MSMA; and he it further

Resolved, That the MSMA honor him in a way that would be fitting to a man of his interest, stature, loyalty to the medical profession and perseverance at an attempt to making life of the doctor in our society a happier and more productive one, thereby helping all of humanity.

With the resolution, Dr. Komanetsky submitted a brief prepared for this meeting by Mr. Allen.

(Referred to Reference Committee on Constitution and By-Laws.)

Dr. Marshall Conrad introduced a resolution from the Joint Committee on Emergency Medical Services from St. Louis and St. Louis County Medical Societies.

Resolution #32—Senate Bill 238

WHEREAS, As physicians of this state, we must concern ourselves in the care of those persons injured on the streets and highways of Missouri; and

WHEREAS, The initial care of the victim at an accident scene may determine if that person is to survive or suffer prolonged disability; and

WHEREAS, The ambulance services of this state vary widely in both equipment and training of the personnel; and

WHEREAS, Minimum standards for performance can and should be enacted; now therefore, be it

Resolved, That the Delegates to the Missouri State Medical Association in convention register their support of Senate Bill No. 238; and, further he it

Noted that the Delegates assembled agree to encourage their representatives and senators to the Missouri Legislature that these legislators will pass this legislation and further be it

Resolved, That the members of the Missouri State Medical Association work with their local ambulance service to insure that they can meet the proper standards. If no ambulance service exists, then it must be the duty of the area physicians to make their local authorities understand and provide for such a service.

(Referred to Reference Committee on Miscellaneous Affairs.)

Dr. Paul Friedman of St. Louis introduced a resolution.

Resolution #33—Restricting Use of Stimulant Drugs

WHEREAS, The United States is faced with a widespread epidemic of drug abuse among its young people; and

WHEREAS, The stimulant drugs are among the most dangerous of the drugs now being extensively abused; and

WHEREAS, The medical usefulness of the stimulant drugs has been steadily decreasing as new and safer drugs are found that serve the same needs; and

WHEREAS, Massive overproduction of these stimulant drugs occurs; and

WHEREAS, Much of this legal overproduction has found its way into the illegal markets, therefore we, the Medical Society of Missouri, do hereby

Resolve, To restrict our use of amphetamines and other stimulant drugs to the treatment of the following four limited conditions: (1) narcolepsy, (2) hyperkinesia, (3) mild depression, (4) as starter doses for obesity; and

Further, We pledge that we will restrict our use of the amphetamines in the latter two conditions to no more than two-week supply of the medication on a nonrefillable basis, and that we will discourage our patients from demanding the stimulant drugs on an excessive or repetitive basis, and that we will not prescribe these medications to new patients unfamiliar to us, but only to patients we know and consider to be of sound temperament, and that for the conditions of mild depression and obesity we will attempt to utilize other safer medications and modalities of treatments prior to use of the stimulant drugs.

We further pledge that we will not sell or dispense these medications ourselves, nor will we obtain these stimulant medications from mail order drug companies; and further be it

Resolved, That we support the new federal efforts to strictly control the manufacture and distribution of the stimulant family of drugs, by (a) placing a quota on their production and (b) incorporating the stimulants into Schedule 2 of the Narcotics Act. We encourage state legislation in this same area.

Further, we will introduce this resolution for adoption by the American Medical Association. We will make this resolution known to the State Department of Health and the State Board of Medical Examiners for their information and consideration.

(Implementing Resolutions)

Be It Resolved, That the aforementioned resolution concerning amphetamine and stimulant drugs be sent forthwith to all members of the State Medical Society in the form of an accompanying pledge, which we ask each member to sign and return as evidence of their participation and good faith in this resolution; and further, be it

Resolved, The above-named resolution shall be made known to the public and made available to all state and federal legislators from Missouri as further evidence of our concern in this area; and be it further

Resolved, That we will make this resolution known to the State Pharmaceutical Association for their consideration and to the manufacturers of stimulant drugs in this country for their information.

(Referred to the Reference Committee on Medical Education and Public Welfare.)

The Speaker announced that due to the absence of Dr. B. J. Bass, Dr. Fisher had appointed Dr. Claude Cooper to serve on the Nominations Committee.

There being no additional business, the Speaker declared the first session of the House of Delegates adjourned.

SECOND SESSION

Friday, April 16, 1971

The Second Session of the House of Delegates was called to order at 4 PM in the Chase Club by Dr. E. D. Imes, Speaker, who presided.

Dr. Gulick of the Credentials Committee reported that a quorum was present.

Dr. Imes invited Dr. Francis X. Lieb, Chairman of the Reference Committee on Constitution and By-Laws, to make his report.

CONSTITUTION AND BY-LAWS

The Reference Committee on Constitution and By-Laws met on April 15, 1971 from 4:30 PM to 6:30 PM. Those present are listed.

Resolution #8—Past-Presidents to Be Delegates-At-Large

The first item to be discussed was the resolution amending the Constitution and By-Laws so that all Past-Presidents shall be Delegates-at-Large. The Reference Committee unanimously approved Resolution #8.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and carried. The Speaker pointed out that the resolution as a Constitutional change must lay over for final action.)

Resolution #26—Article IX, Constitution and By-Laws

The next discussion concerned Resolution #26 which concerns a general referendum. The Reference Committee does not approve this resolution.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and carried.)

Resolution #16—Use of Referendum

Resolution #16 was then considered. The Reference Committee amends this resolution by substituting "10% of the membership" for "400 members" so that the amended Article IX in its entirety will read as follows:

At any general meeting of the Association it may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates. The House of Delegates may, by a vote of its members, submit any question to the membership of the Association for its vote.

Petitions signed by 10% of the membership or by Councilors from three districts or by 25% of the Delegates at the last annual meeting will initiate a referendum regarding changes in the Constitution or By-Laws or questions before the House of Delegates or Council.

A majority vote of all members of the Association shall determine the question.

With this amendment, the Reference Committee unanimously approves Resolution #16.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and the Speaker asked for discussion.)

Dr. Hettlage of St. Louis introduced an amendment that would change the final paragraph of the Resolution #16 to read as follows:

A majority of all those voting shall determine the question providing the total vote represents at least 33% of the active membership of the MSMA.

The motion to adopt this amendment was seconded and defeated by a vote of 80 to 50. Dr. Hershey of St. Louis County then moved to amend Resolution #16 by the following sentence at the end of the second paragraph:

No more than half of the petitioners may come from one Councilor District.

The motion to adopt the amendment was seconded. After a lengthy discussion, this amendment was de-

feated. Dr. Burford of Cape Girardeau moved that the proposed change in the By-Laws be rereferred to the Reference Committee for reconsideration. The motion was seconded and approved.)

Resolution #17—Abolish Dues for Junior Members

The next item discussed by the Reference Committee was Resolution #17, which states:

Now, Therefore, Be It Resolved, That the St. Louis County Medical Society urge the Missouri State Medical Association to amend Chapter VIII, Section 1, (a) by deleting the words, "The per capita levy for junior members shall be one half of the per capita levy for active members" and adding the word "junior" to the next phrase of the section, and

Further Be It Resolved, That in Chapter VIII, Section 1, (b) that the words "and \$5.00 per year on each junior member" be deleted.

The Reference Committee unanimously approved this recommendation.

Mr. Speaker, I move the adoption of this portion of the report with this proposed change in the By-Laws to lay on the table until the next meeting of the House of Delegates on Sunday, April 18.

(The motion was seconded. After the invitation for discussion, Dr. Paul Whitener, St. Louis County, introduced an amendment that would extend the privileges of junior members to "officially registered medical students in an accredited medical school who are members of a component medical society." Dr. Lieb asked for permission to adjust the Committee's report on Resolution #17 so that Dr. Whitener's amendment would be in order. Following further extensive discussion, Dr. Burford of Cape Girardeau moved that the Reference Committee's report on Resolution #17 be rereferred to that Committee for reconsideration. The motion was seconded and approved.)

Resolution—Continue Assessment for MSMF

The Reference Committee then considered the resolution from the Council meeting minutes of January 29-30 to continue the assessment for support of the Missouri State Medical Foundation and recommends approval of this resolution in conformity with the above proposed changes in the MSMA junior membership category.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and approved.)

In order to activate the action of the House of Delegates regarding the three-year continuation of the assessment for the MSMF, the Reference Committee submits a change in the By-Laws, which reads as follows:

Amend Chapter VIII, Section 1, (b), Page 10 of the By-Laws, 1970 Revision, line 4, as follows:

Strike out the date in line 4, 1969, and insert in lieu thereof the date 1972.

Mr. Speaker, I move that this change in the By-Laws, which the Committee has submitted, be tabled until the House of Delegates meets again on Sunday, April 18.

(The motion was seconded and carried.)

Resolution #31—Regarding Mr. Norris Allen

The next resolution which was considered concerns Mr. Norris Allen. The Committee recognizes Mr. Allen's efforts in behalf of the profession and the exemplary manner in which he has performed his duties, but the Committee does not recommend the adoption of

this resolution because of time limitations and lack of precedent.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and carried.)

The next order of business was the consideration of the report of the Committee on Constitution and By-Laws, and we recommend the implementation of their recommendations concerning the changes in the By-Laws, as follows:

That Chapter 1, Membership, Section 1 be amended by deleting the words "a citizen of the United States" in lines 7 and 8.

That Chapter 1, Membership, Section 4, associate members be amended by deleting the following sentence, "This shall include physicians who meet medical examiners' qualifications but have not received their citizenship, these Associate members to apply for active membership within one year after citizenship is granted."

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and approved.)

The next order of business was consideration of the action of the Council on April 5, 1970. I quote:

"Dr. Miller brought up the subject of clarification of floor privileges in the House of Delegates for elected officers of the Association. It was pointed out that this was not clearly spelled out in the MSMA Constitution and By-Laws. It was moved and seconded that this problem be referred to the Committee on Constitution and By-Laws for study and clarification."

The Reference Committee felt that privileges for officers and delegates is covered in those sections specifically devoted to each classification. If an officer is also an elected delegate, he may serve in both capacities.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and carried.)

Mr. Speaker, I move the adoption of this report, as amended, as a whole.

(The motion was seconded and carried.)

The Speaker invited Dr. F. Eugene Pennington, Chairman of the Reference Committee on Resolutions, to make his report.

RESOLUTIONS

The meeting of the Reference Committee on Resolutions was held at 9 PM on April 15, 1971 in the Coach Room of the Chase-Park Plaza Hotel with all members present.

The Committee reviewed those portions of the Council minutes referred to the Resolutions Committee in the booklet of Official Reports to the House of Delegates, January 29-30, 1971. The verbal and written report of the April 14 meeting of the Council was accepted for information.

The Committee recommends the acceptance of the report of the Commission on Medical Economics, Third Party Medicine and Governmental Relations with the exception of deleting the final statement that the complete report of "The Ad Hoc Committee to Study the Negotiation of Professional Fees is in the handbook."

The report of this Committee appears in the minutes of the Council meeting of January 29-30, 1971 and it is

recommended that this Committee expedite its assigned task.

The final report of the Ad Hoc Blue Shield Committee was accepted for informational purposes only. There was considerable constructive discussion of the report by the delegates and members at the Reference Committee. The Resolution Committee recommends that the report of the Ad Hoc Blue Shield Committee be referred back to the MSMA Council with the further recommendation that a new Ad Hoc Committee be appointed to continue the consideration of the realistic merits and problems in the Kansas City Blue Shield and Missouri Medical Services of St. Louis plans and to consider further recommendation of the present committees, in conjunction with representatives of the two Blue Shield plans, all with the interest of improving the benefits to the subscribers and rapport with the physicians.

The report of the Commission on Interspecialty Medicine was received and approved.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded. After discussion, the motion carried.)

The Committee next reviewed all resolutions presented to the Committee.

Resolution #3—Retention of Private Health Care System

Resolution #3, which was introduced by Clay County Medical Society, was approved.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and passed.)

Resolution #4—Third Party Carriers Notification Practices Concerning Fees

Resolution #4, which was introduced by Clay County Medical Society, was approved as amended. It reads as follows:

WHEREAS, Many third party carriers are making a common practice of notifying the insured that the physician's fee was beyond the usual and customary fee for such a service; and

WHEREAS, Such a notification to the insured is not coincident with the truth, in most instances, and places the physician in an unfavorable light with his patient; and

Resolved, By the House of Delegates of the Missouri State Medical Association, to soundly condemn this practice by private insurance carriers and urge the members of the Missouri State Medical Association to not cooperate in any way with insurance companies engaging in such a practice in reviewing problems relating to fees until such practice is stopped; and, be it finally

Resolved, That all private insurance companies be advised that appropriate medical fee review mechanisms have been established and that problems in this area should be handled through these channels.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and carried.)

Resolution #7—Blue Shield of Kansas City

Resolution #7, which was introduced by Jackson County Medical Society, was approved.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and approved.)

Resolution #14—Subscriber Representation on Blue Shield Boards

Resolution #14, which was introduced by Jackson County Medical Society, was agreed to in principle by this Committee. Inasmuch as this Committee recommends the reappointment of another Ad Hoc Committee to continue the study of the two Blue Shield plans, it is felt that passage of this resolution is not pertinent at this time.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded. Discussion followed. Dr. Bowles of Clay County moved to amend this portion of the report by deleting the last sentence and by adding to the first sentence, "And we, therefore, recommend approval of this resolution." The motion to amend the report was seconded and approved.)

Mr. Speaker, I move the adoption of this portion of the report as amended.

(The motion was seconded. Dr. Sisk of St. Louis then moved that Resolution #14 be amended by deleting the words "of at least 40%" so that this portion of the resolution will state that "The National Association of Blue Shield Plans has officially called upon individual plans to assure subscribers representation on their governing boards." The motion was seconded and carried.)

Mr. Speaker, I move that this portion of the report be adopted as amended.

(The motion was seconded and carried.)

Resolution #13—Method of Reimbursement to Hospitals by Blue Cross

Resolution #13, which was introduced by the Ozarks Medical Society, is deferred and the Reference Committee on Resolutions requests representatives of Ozarks Medical Society to meet with the Committee immediately following the Friday Session.

Resolution #20—Outpatient Medicare Coverage of Patients with Emotional Problems

This Committee recommends that Resolution #20, which is sponsored by the Joint Council of the Missouri Psychiatric Association and the Mental Health Committee of the St. Louis City Medical Society, be referred to the appropriate Commission for further study and recommendation.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded and passed.)

Resolution #28—Comprehensive Health Planning

Resolution #28 was rejected by the Committee for lack of definition.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and approved.)

The Annual Report of the Health Care Foundation of Missouri, 1971, was approved. The Committee takes note of the many hours of work and dedication put into

the organization of the Health Care Foundation of Missouri by all members connected therewith and wishes to commend them.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded. There was discussion. Dr. McCloskey of St. Louis moved that the words "to be confirmed by referendum of the entire body of the Missouri State Medical Association" be added to the Reference Committee's recommendation regarding this resolution. His motion was seconded and defeated. The motion to adopt this portion of the report was then approved.)

Resolutions #15, #22, #27, #29, #30

Resolutions #15, #22, #27, #29 and #30, all having to do with rejection, postponement or actual denunciation of the Health Care Foundation of Missouri and the State-wide Peer Review Program, received lengthy and vigorous discussion by approximately 40 different speakers in a session lasting more than three hours. This Committee carefully weighed the most interesting and informative compilation of testimony, which was heard in a truly democratic fashion, in arriving at the decision that these resolutions not be accepted. The overwhelming majority of opinion of those in attendance, while offering suggestions for improvement, favored approval and continuation of the existing program.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and carried.)

**Resolution #9—Health Care Foundation of Missouri
Resolution #18—Peer Review**

Having approved the Annual Report of the Health Care Foundation of Missouri, the Committee recommends the approval of Resolution #9, which was submitted by Jackson County Medical Society, and Resolution #18, which was submitted by Buchanan County Medical Society.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and carried.)

Testimony before this Committee suggested that much of the opposition to this program stems from lack of communication at various levels and it is recommended that the Health Care Foundation, MSMA, Commissions and Committees take due notice of this observation.

Mr. Speaker, I move adoption of this report in its entirety as amended.

(The motion was seconded and approved.)

The Speaker invited Dr. R. G. Stockton, Chairman, to present the report of the Reference Committee on Medical Education and Public Welfare.

MEDICAL EDUCATION AND PUBLIC WELFARE

Mr. Speaker, the Committee on Medical Education and Public Welfare met at the Chase Hotel in St. Louis on Thursday, April 15, 1971, at 4 P.M. All members were present. It was recommended that the published report

of the following committee be adopted and approved as standing:

The Committee on Continuing Education and Health Manpower.

It was recommended that the published minutes of the Council Meetings of April 5, 1970; May 23-24, 1970; October 3-4, 1970; December 12-13, 1970; and January 29-30, 1971 be approved and, also, that the supplementary report of the Council be approved.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded and carried.)

**Resolution #25—Use of Licensed Practical Nurses
to Administer Intravenous Fluids**

Resolution #25, which was submitted by Pemiscot County Medical Society, was approved.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and approved.)

Resolution #10—Drug Abuse

Resolution #10, which was introduced by Butler-Wayne-Ripley Medical Society, was recommended for disapproval by the Committee.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and carried.)

Resolution #33—Restricting Use of Stimulant Drugs

Resolution #33 on restriction of the use of stimulant drugs was approved with the following change in the second paragraph:

Therefore, we, the Missouri State Medical Association, do hereby resolve to restrict our use of amphetamines and other stimulant drugs to the treatment of specific, well-recognized medical indications, such as (1) narcolepsy, (2) hyperkinesia, (3) mild depression, (4) starter doses for obesity.

The original resolution limited the use of the drugs to the above four conditions. The Committee's change states "the treatment of specific, well-recognized medical indications, such as."

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and passed.)

Resolution #23—Noise Control

Resolution #23 on noise control, which was submitted by Dr. Joseph Edwards of St. Louis, was referred back to Dr. Edwards for further information concerning existing compensation for hearing loss and present legislation requiring protective hearing devices, if such exist.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded. Dr. Edwards moved that the Committee's report be amended to approve the resolution. His motion was not seconded so was lost. The motion to approve the Committee's action was approved.)

Mr. Speaker, I move adoption of the report as a whole.

(The motion was seconded and carried.)

The Speaker invited Dr. G. W. Blankenship, Chairman, to present the report of the Reference Committee on Miscellaneous Affairs.

MISCELLANEOUS AFFAIRS

The Reference Committee on Miscellaneous Affairs convened in the Colonial Room of the Chase-Park Plaza Hotel at 4:30 PM on Thursday, April 15, 1971 with Dr. Blankenship, Chairman, and members of the Committee who were Drs. George Ladyman, Paul Max, Robert Thompson and Donald Spencer.

The official reports of the Commission on Public Affairs, the Committee on Legislative Affairs and counsel to the House of Delegates have been published and have been issued to each delegate to this Convention. The Committee also reviewed the supplementary report of the Council.

All of these reports which were referred to the Miscellaneous Reference Committee at the meeting of the House of Delegates on April 15, 1971, were individually reviewed and accepted.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded and carried.)

Resolution #1—Required Membership on Hospital Staffs

The Committee considered Resolution #1, which was submitted by Mineral Area Medical Society, and recommended approval of this resolution as written.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded and approved.)

Resolution #2—New Regulations for Chiropractors

The Committee considered Resolution #2, which was submitted by St. Louis Medical Society. Upon the recommendation of Dr. Jack Matthews, Chairman of the Legislative Affairs Committee, the author of Resolution #2 withdrew the resolution.

Resolution #5—Immunity for Peer Review Physicians

The Committee considered Resolution #5, submitted by Clay County Medical Society, and recommended approval of this resolution as written.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded. After discussion, it was approved.)

Resolution #6—Medical Examiner System for Missouri

The Committee considered Resolution #6, submitted by Clay County Medical Society. At the suggestion of Dr. William Mayer, of Columbia, the resolved portion of this resolution was changed to read, as follows:

Resolved, That the House of Delegates of the Missouri State Medical Association goes on record as strongly endorsing the establishment of a medical examiner system by appropriate legislation, and be it further

Resolved, That the Medical Legal Committee and the Legislative Committee of the Missouri State Medical Association be instructed to design and seek sponsors for a pilot medical examiner act.

It was felt that to design this for the entire state

would be too costly and that possibly the Legislature would accept a pilot program.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded and carried.)

Resolution #12—Drunk Driver Test

The Committee considered Resolution #12, which was submitted by the Emergency Medical Services Committee of the St. Louis and St. Louis County Medical Societies. The resolution was changed to read, as follows:

Resolved, That the Missouri State Medical Association goes on record in favor of changing the blood alcohol definition of intoxication from 100 ml of blood to 0.10 gm; and be it further

Resolved, That a copy of this resolution be sent to every member of the Legislature of this State.

The Committee recommends approval of this resolution.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded and approved.)

Report of Ad Hoc Committee on Alcoholism and Drug Abuse

The Committee considered the supplemental report of the Ad Hoc Committee on Alcoholism and Drug Abuse concerning alcoholism and drug abuse education. The *resolved* portion of that resolution is as follows:

Resolved, That more education on alcoholism and drug abuse be made available at all levels and that instruction about these illnesses be offered in schools of medicine, nursing and social work, as well as in colleges and high schools, the committee making itself available to assist in setting up courses; and, be it further

Resolved, That a symposium on alcoholism and drug abuse be presented at next year's meeting of the Missouri State Medical Association and the Committee set up such a meeting; and, be it further

Resolved, That the insurance companies in the state be urged by the Missouri State Medical Association to offer more coverage in their policies to cover the illnesses of alcoholism and drug abuse; and, be it further

Resolved, That the industries in the state be urged to follow the leadership of some of the larger corporations in setting up alcoholism and drug abuse programs in industry; and, be it further

Resolved, That general hospitals be urged to accept alcoholics as they would anyone with another disease and to accept them under the true diagnosis and not under some subterfuge.

The Committee recommends approval of this report.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded and carried.)

Resolution #11—Health Care for the Poor

The Committee considered Resolution #11, which was submitted by St. Louis Medical Society, and did not recommend approval of this resolution.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded and passed.)

Resolution #19—Problems in Discharge of Hospital Patients

The Committee considered Resolution #19 which was submitted by the Mental Health Committee of St. Louis and the Joint Council of the Missouri Psychiatric Association. The Committee did not recommend approval of this resolution.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded and carried.)

Resolution #21—Right to Life

The Committee considered Resolution #21, which was submitted by Dr. Charles Jost, concerning a change in the wording of Section 2, Article I of the Constitution of the State of Missouri. The Committee did not recommend approval of this resolution.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded. After discussion, it was passed.)

Resolution #24—Public Labeling of Prescription Drugs

The Committee considered Resolution #24, which was submitted by Greene County Medical Society. The Committee recommends approval of this resolution.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded and approved.)

Resolution #32—House Bill 238

The Committee considered Resolution #32, which was submitted by the Emergency Medical Service Committee of St. Louis and St. Louis County Medical Societies and concerns standards for ambulance service. The Committee recommends approval of this portion of the report and I move its adoption.

(The motion was seconded and, after discussion, approved.)

Mr. Speaker, I move adoption of the entire report as amended.

(The motion was seconded and approved.)

The Speaker invited Dr. Frank B. Matteson, Chairman of the Reference Committee on Reports of Officers, to give his report.

REPORTS OF OFFICERS

The Reference Committee on Reports of Officers met in the Park Room of the Chase-Park Plaza Hotel on April 15, 1971 with all members present.

The reports of the President, Joseph L. Fisher; Incoming President, Gerald L. Miller; President of the Woman's Auxiliary to the MSMA, Mrs. William M. Walker; and the President of the Missouri Society, American Association of Medical Assistants before the House of Delegates were accepted and recommended for approval.

The Committee recommends approval of the reports of the Treasurer, Secretary, Executive Secretary, Publications Committee and the Report of the Committee on Planning, as published in the Delegates Handbook. The Committee on Planning Progress report also was approved.

Those portions of the Council's supplementary report assigned to this Committee were approved.

The Committee requests that the present procedure for the 50-Year members be reviewed.

The Committee accepted the Council minutes of the past year as published in MISSOURI MEDICINE.

Mr. Speaker, I move the adoption of this report.

(The motion was seconded and approved.)

Dr. Thomas Fischer, Chairman, was asked to give the report of the Reference Committee on Necrology.

NECROLOGY

The Reference Committee on Necrology met in the Chase Club of the Chase-Park Plaza Hotel on April 15, 1971. The Reference Committee on Necrology of the Missouri State Medical Association regrettably reports that there have been 78 deaths among members since the 1970 Annual Session, whose names are attached to this report.

Each of these members is missed as an individual and for his contributions to the practice of medicine and the Missouri State Medical Association. The loss of each member is keenly felt by our individual members, his loved ones and close associates and, we are confident, the patients he has served with dedication.

Condolences in the form of a tribute have been sent to the immediate family of each deceased member, and this expression will continue to be sent in the future.

In addition, the Committee brings to your attention with deepest regret the death during the past year of Mr. Thomas R. O'Brien, former Executive Secretary and staff member of the Association.

With these thoughts in mind, the Necrology Committee offers the following resolution:

Be It Resolved, That the House of Delegates now stand for a moment of silence and prayer to pay personal tribute and to honor the memory of Tom and the 78 members we have lost this past year and whose names will be recorded in the Minutes of this Annual Session.

Be It Further Resolved, That this moment of quiet and meditation will serve as a time of our individual rededication to our purpose in the ministry of medicine as we honor the names and unselfish devotion of all departed members of the Missouri State Medical Association; and,

Be It Further Resolved, That we emulate their examples and praise God for good men and women.

Mr. Speaker, I move that the report of the Necrology Committee be approved.

(The motion to adopt the report was seconded and the Speaker asked the House of Delegates to stand for a moment of silence in indication of approval of the motion.)

MEMBERS DECEASED SINCE THE 1970 ANNUAL SESSION

Thomas, Forrest, M.D., St. Joseph
Kyner, Thomas A., M.D., Kansas City
Weinsberg, William C., M.D., St. Louis
Thomas, Charles S., M.D., St. Louis
Eastwood, Robert A., M.D., Springfield
Bardenheier, J. Phil, M.D., St. Louis
Vail, Denton A., M.D., Springfield
Meyer, Curtis A., M.D., St. Louis
Hanlon, Russell C., M.D., St. Charles
Rawlins, Kelly, M.D., Holden
Martin, Wilfred E., M.D., Odessa
Bartels, Leo G., M.D., St. Louis
Bohrer, Harry C., M.D., St. Louis
Luten, Drew W., M.D., St. Louis
Rouse, David M., M.D., Mexico
Johnson, Morris B., M.D., Hickman Mills
Cooper, John H., M.D., Kansas City
Reitz, Carl H., M.D., Kansas City

Hendren, Glenn W., M.D., Liberty
 Finney, William, M.D., Chaffee
 Cilkey, Harry M., M.D., Kansas City
 Davis, F. L., Sr., M.D., St. Louis
 Denko, William, M.D., St. Louis
 White, Orville O., M.D., St. Louis
 Patient, William F., M.D., St. Louis
 Hayden, Loyola F., M.D., St. Louis
 Hornback, Edward R., M.D., Joplin
 Hashinger, Edward H., M.D., LaJolla, Calif.
 Mabrey, John P., M.D., Plattsburg
 Bolgar, Bertalan B., M.D., Festus
 Copher, Glover H., M.D., St. Louis
 Charles, Cecil M., M.D., St. Louis
 Kelly, Eugene H., M.D., Ironton
 Reynolds, James R., M.D., Neosho
 Weber, William K., M.D., Clayton
 Bindbeutel, Arthur H., M.D., St. Louis
 Bugg, Andrew F., M.D., Lordsburg, N. M.
 Davie, Joseph, M.D., St. Louis
 Sheets, Martin E., M.D., Chesterfield
 Underwood, Ross, M.D., Shawnee Mission, Kan.
 Cleveland, Horace F., M.D., Long Beach, Calif.
 Emmert, Frederick V., M.D., St. Louis
 Haynes, Pugh, Jr., M.D., St. Louis
 Huber, Erwin T., M.D., St. Louis
 Weinell, Francis G., M.D., St. Louis
 Day, Anthony B., M.D., Marshall
 Mead, S. T., M.D., Concordia
 Smith, Grafton A., M.D., Columbia
 Brooks, John M., M.D., Springfield
 Doggett, Sylvester, M.D., Sikeston
 Hofstatter, Lilli, M.D., St. Louis
 McCann, John F., M.D., St. Louis
 Nunn, Pat Morris, M.D., Greenwich, Conn.
 Walsh, Thomas J., M.D., St. Louis
 Barnett, Julian H., M.D., Kirkwood
 Castelow, Rush E., M.D., Kansas City
 Dennie, Charles C., M.D., Kansas City
 Hornback, Edward R., M.D., Joplin
 Pickens, E. E., M.D., San Diego, Calif.
 Press, Maurice J., M.D., St. Louis
 Ramos, John F., M.D., Kansas City
 Rodeman, John M., M.D., Sedalia
 Seabaugh, Oda L., M.D., Cape Girardeau
 Cresswell, George F., M.D., Potosi
 Ganley, William C., M.D., Kansas City
 Craham, James W., M.D., Independence
 Johnson, William A., M.D., Kansas City
 Evans, Harry T., M.D., Branson
 Forgrave, John R., M.D., St. Joseph
 Hanes, Robert L., M.D., Kansas City
 Kepler, Earl C., M.D., Fulton
 Gonser, Karl B., M.D., Sedalia
 Click, Harry N., M.D., St. Louis
 Hanser, S. Albert, M.D., St. Louis
 Brown, James Barrett, M.D., St. Louis
 Larimore, Joseph W., M.D., St. Louis
 Brennan, John A., M.D., St. Louis
 Kohler, Eugene J., M.D., St. Louis

The Speaker requested any additional reports of the Council. There being none, he invited new business.

Introduction of New Business

Dr. Burford of Cape Girardeau introduced the following resolution:

Resolution #34—Reading and Recording of Resolutions

WHEREAS, The House of Delegates of the MSMA is called to act upon many important matters presented to it in the form of various resolutions; and

WHEREAS, These various resolutions are referred to Reference Committees for evaluation and study; and

WHEREAS, After such evaluation and study by said Reference Committees, such resolutions are presented back to the House of Delegates; sometimes with approval as written, sometimes with recommendation for complete rejection as written and sometimes with various modifications; and

WHEREAS, On not infrequent occasions in the past the reports of said Reference Committees to the House of Delegates have been vague and imprecise in laying before the House exactly what recommendations are being proposed for action; and

WHEREAS, As a result of these inexact reports from Reference Committees primarily because of failure to state clearly what action is proposed, hasty and sometimes ill advised, or uncertain actions have been taken by the House of Delegates, resulting in subsequent long, difficult, perplexing and arduous attempts to either clarify or rectify these actions; therefore be it

Resolved, That this MSMA House of Delegates shall set up procedures for all subsequent House of Delegates meetings, requiring that before final action on any Resolution is taken, said resolution shall be read before the House and recorded in the minutes. This would not preclude the deletion of preamble type whereas at the final reading before action.

(Referred to Reference Committee on Constitution and By-Laws.)

Resolution #35—Health Maintenance Organizations (HMO's)

Dr. Chris Fotopoulos of Clay County Medical Society introduced the following resolution:

WHEREAS, The current emphasis by government health planners is to promote and subsidize the formation of health maintenance organizations (HMO's); and

WHEREAS, HMO's are organizations who dispense medical services through the efforts of employed physicians to patients on a capitation basis; and

WHEREAS, These employed, salaried physicians are working primarily for the HMO and not the patient; and

WHEREAS, The major established HMO's, at present, are so organized that the income of the salaried physician stockholder is tied to the amount of services dispensed by the organization; and

WHEREAS, The income of the salaried physician is logically increased by a decrease in the amount of services dispensed by his organization for the patients who subscribe to it; and

WHEREAS, This principle tends to cause the doctor to do less for the patient;

Now, Be It Therefore Resolved, By the House of Delegates of MSMA that this type of health care delivery system requires a great deal more study and analysis before tax dollars are used to subsidize it, and be it further

Resolved, That the MSMA makes every effort to explain to the Missouri health consumer the difference between HMO-capitation medicine and fee-for-service medicine as is now generally practiced; and be it further

Resolved, That MSMA Delegates to AMA be instructed to introduce the concept of this resolution to the AMA House of Delegates; and be it fully

Resolved, That MSMA go on record as opposing this type of Health delivery system to the exclusion of other delivery systems.

(Referred to Reference Committee on Resolutions.)

Dr. Fotopoulos introduced a second resolution.

Resolution #36—Introduction of Resolutions

WHEREAS, The time of the House of Delegates has been misused by the introduction of multiple resolutions presented at the time of the annual meeting; and

WHEREAS, It is impossible to give adequate thought to resolutions of serious import within the time provided for the annual meeting; and

WHEREAS, Some resolutions carry a personal weight not important to the entire group;

Now, Be It Therefore Resolved, That all resolutions set forth before the annual meeting of the Missouri State Medical Association House of Delegates be submitted for publication so that each county association may have the resolutions in hand for review 30 days prior to the state meeting.

But, Recognizing the possible emergency nature of some important resolutions, such resolutions may be proposed provided they are presented to the Council 24 hours before the first House of Delegates session, with sufficient copies for review by the Council and copies for the entire House of Delegates at the opening session.

(Referred to the Reference Committee on Constitution and By-Laws.)

Resolution #37—Health Care Foundation of Missouri

Dr. Komanetsky of St. Louis introduced the following resolution:

WHEREAS, A great number of the members of the MSA, including 45 delegates who, in one group, assembled on March 23, 1971 at the St. Louis Medical Society Auditorium seemed to know very little or nothing of the Health Care Foundation of Missouri; and

WHEREAS, Such a far-reaching, restrictive, oppressive and repugnant vehicle in a free society is both repugnant and distasteful to the freedom that all other professions enjoy; and

WHEREAS, Such a vehicle as the HCFM will frustrate and negate the real purpose of the Local Medical Societies, which already have honest real peer review, have promoted quality care for years, promoted ethics and education at the most effective local level; and

WHEREAS, The crisis in the medical delivery system has been blown out of proportion by politicians to cover up the false predictions of our Social Health planners placing the onus of blame on the private practitioner of medicine for the increase in health costs, thievery in federal and state programs; poverty, inflation, malnutrition, infant mortality and ad infinitum; and

WHEREAS, Under the guise of a propaganda barrage, our medical leaders feel that "if we don't do it (whatever the words "do it" mean in this instance), they (whoever that means) will do it to or for us," all the time forgetting that this great country of ours is still the finest and freest in the world—and if "they will do it to you—it will no longer be free and this will no longer be a free society, but one where involuntary servitude will abound as in Russia and other states with totalitarianism"; and

WHEREAS, The HCFM is a gestapo-like organization with doctors, reviewing insurance companies reports, principally to evaluate costs in spite of their noble proposed aims at improving quality and providing education; and

WHEREAS, It was promulgated, as Dr. T. J. Fisher said in his letter, in the interests of professionalism (whatever that means) and with particular emphasis on functional structure of Peer Review as it related to Medicaid in Missouri; and

WHEREAS, The name Peer Review is only used to describe it in passing and on page 15 of the MSMA reports of Council Meeting, 1970, under the title "State Policy Coordinating Committee for Peer Review," the last sentence reads—Mr. Cooper states, "However, in the future, possibly the Blues, representatives of the Health Insurance Council, state and federal government representative, labor, management and consumers will be included in an advisory capacity," this proving that the HCFM is destined to be slowly or perhaps quickly taken over by these groups, and this is the reason the title Peer Review Foundation was not used in naming it; therefore, in view of the above he it

Resolved, That the HCFM be studied, be freely discussed among all the members of the MSMA and not a select few; and be it

Resolved, That the House of Delegates study it for a year, and if they deem it to be a progressive or a regressive step for the free private practice of medicine, it would only be fair, proper and honest to submit it to a referendum vote of the general membership; and also be it

Resolved, That after this is done, the MSMA leadership (the Council and Board of Directors), will not be accused of being derelict in duty in not keeping their membership informed as to the details, modus operandi, philosophical, political and other far-reaching effects of this the most important vehicle ever placed before this body; and therefore be it finally

Resolved, That the House of Delegates set aside the HCFM for a year in spite of the money spent, since there is no price too large for freedom, and if the HCFM is allowed to continue, your freedom may not.

(Referred to Reference Committee on Resolutions.)

There being no further business, the Speaker adjourned the Second Session of the House of Delegates with the announcement that the Annual Meeting of the Missouri State Medical Foundation would be held immediately following adjournment.

THIRD SESSION

Sunday, April 18, 1971

The Third Session of the MSMA 113th House of Delegates was called to order by the Speaker, Dr. E. D. Imes, at 7:30 AM in the Chase Club of the Chase-Park Plaza Hotel. Dr. Charles R. Gulick, Chairman of the Credentials Committee, reported the presence of a quorum. With unanimous consent, the Speaker dispensed with a roll call and the reading of the minutes of the previous two sessions.

Dr. Hugh E. Stephenson, Chairman of the Nominating Committee, was invited to present the report of his committee.

NOMINATING COMMITTEE

The Nominating Committee met in the Park Room of the Chase Hotel on Saturday, April 17. All members were present and included Drs. Wadlow, Lewellen, O'Neal, Hershey, MacGee, Stelmach, Mayer, Cooper and Ruff.

The Committee submits the following slate of nominees for approval by the Association:

Vice-President—Dr. William W. Gist, Kansas City

Vice-President—Dr. Raymond Ritter, Cape Girardeau

Vice-President—Dr. Joseph L. Johnston, Springfield

AMA Delegate—Dr. Hector W. Benoit, Jr., Kansas City

Alternate AMA Delegate—Dr. Hugh E. Stephenson, Jr., Columbia

AMA Delegate—Dr. Arthur W. Neilson, St. Louis

Alternate AMA Delegate—Dr. Robert W. Kelley, St. Louis

Speaker of the House—Dr. Elvin D. Imes, Maryville

Vice-Speaker of the House—Dr. Robert A. Slickman, Kansas City

Mr. Speaker, I move the adoption of this report.

The Speaker invited additional nominations from the floor. Hearing none, he entertained a motion that the nominations cease and that a unanimous ballot be cast for the slate as presented by the Nominating Committee. The motion was seconded and approved.

At this time, the Speaker invited nominations for the office of President-Elect. Dr. Max Franklin of St. Louis nominated Dr. Walter T. Gunn of St. Louis. The nomination was seconded by Dr. Doyle C. McCraw and Dr. Lawrence O'Neal, who moved that nominations cease and that Dr. Gunn be elected by acclamation. The motion was seconded and approved.

The new President-Elect was escorted to the Speaker's stand where he made a brief acceptance statement.

Dr. John I. Matthews, Secretary, announced that the following Councilors had been elected for two-year terms:

Dr. Louis P. Hetlage, Fourth District

Dr. William D. Bradshaw, Sixth District

Dr. Howard J. McAlhany, Eighth District

Dr. Max S. Franklin, Third District (to fill unexpired term of Dr. Gunn)

The Speaker then called for additional reports of the Reference Committees.

Dr. Francis X. Lieb, Chairman, was invited to present the additional report of the Committee on Constitution and By-Laws.

CONSTITUTION AND BY-LAWS

Mr. Speaker, the Reference Committee on Constitution and By-Laws met on Friday afternoon following the session of the House of Delegates. Those present were listed. The first order of business was discussion of Resolution #34 which pertains to reading and recording of resolutions.

Resolution #34—Reading and Recording Resolutions

The Committee agrees in principle with the resolution as submitted, but does not believe that any action is necessary on the part of the Committee. The Committee feels that this is a matter for parliamentary procedure and possibly more thorough indoctrination of the

Reference Committee Chairmen as to the preparation of the Minutes would suffice.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and carried.)

The next order of business was consideration of Resolution #36, which concerns introduction of Resolutions.

Resolution #36—Introduction of Resolutions

The Reference Committee agrees in principle with the resolution, but does not recommend its approval, since the Committee feels that this matter should be referred by the Council to an appropriate committee for possible implementation at the next annual session.

Mr. Speaker, I move adoption of this portion of the report.

(The motion was seconded and passed.)

Resolution #16—Use of Referendum

The Committee next reconsidered Resolution #16, which was referred back to the Committee by the House of Delegates.

Now, Therefore, Be It Resolved, That Article IX of the Constitution of this Association be amended by adding thereto after the end of the second sentence of said Article the following: "Petition signed by 400 members or by Councilors from three districts or by 25% of the Delegates at the last annual meeting, shall initiate a referendum regarding changes in the Constitution or By-Laws or questions before the House of Delegates or Council."

So that the amended Article IX, in its entirety, will read as follows:

At any general meeting of the Association it may by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates. The House of Delegates may, by a vote of its members, submit any question to the membership of the Association for its vote.

Petitions signed by 400 members, or by Councilors from three districts or by 25% of the Delegates at the last annual meeting will initiate a referendum regarding changes in the Constitution or By-Laws or questions before the House of Delegates or Council.

A majority vote of all members of the Association shall determine the question.

The Reference Committee, after careful consideration of all aspects of the resolution and further consultation with many interested delegates at the hearing, does not recommend the adoption of this resolution. The Committee further recommends that the permanent Committee on Constitution and By-Laws take this matter under study and come to a satisfactory conclusion in time for the next annual meeting so that it may again be considered for a vote.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and carried.)

Resolution #17—Abolish Dues for Junior Members

The next order of business was reconsideration of Resolution #17. The Reference Committee unanimously approved this resolution.

Now, Therefore Be It Resolved, That the St. Louis County Medical Society urges the Missouri State Medical Association to amend Chapter VII, Section 1,

a) by deleting the words "the per capita levy for junior members shall be one-half of the per capita levy for active members" and add the word "junior" to the next phrase of the section, and

Further Be It Resolved, That in Chapter VIII, Section 1,

b) that the words "and \$5.00 per year on each junior member" be deleted.

Mr. Speaker, I move the adoption of this portion of the report with the proposed change in By-Laws to lay on the table until the next meeting of this House of Delegates.

(The motion was seconded. Dr. Hershey moved that the words "St. Louis County Medical Society urges" be deleted from this portion of the resolution so that it will read, "Be It Therefore Resolved that the Missouri State Medical Association amends Chapter VII, Section 1. . . ." His motion was seconded and approved.)

Mr. Speaker, I move the adoption of this portion of the report as amended.

(The motion was seconded and approved.)

In conjunction with the above recommendations, the Reference Committee submitted a proposed change in the By-Laws, Chapter I, Section 3, dealing with junior members by deleting the paragraph dealing with junior members and substituting the following:

Junior members shall be limited to those members of component societies who are serving a full time training internship or residency in a hospital approved by the American Medical Association. They shall enjoy all the privileges of active membership, except the voting privilege, and shall be exempt from the payment of dues.

The Reference Committee further recommends that the MSMA investigate the practicability of establishing a student membership and encouraging the component societies to do the same.

Mr. Speaker, I move the adoption of this portion of the report and that this proposed change in the By-Laws lay on the table until the next meeting of the House of Delegates.

(The motion was seconded and carried.)

The House of Delegates in action during Friday's session tabled an amendment to Chapter VIII dealing with the continuation of the MSMA assessment for another three years. It reads as follows:

Amend Chapter VIII, Section 1, page 9 of the By-Laws, 1970 revision, line 4, as follows:

Strike out the date in line 4, 1969, and insert in lieu thereof the date 1972. This has to do with continuing the MSMF assessment for three years, '72, '73 and '74.

Mr. Speaker, I move the adoption of this change in the By-Laws.

(The motion was seconded and carried.)

Mr. Speaker, I move the adoption of this report in its entirety as amended.

(The motion was seconded and carried.)

The Speaker invited Dr. Eugene Pennington, Chairman of the Reference Committee on Resolutions, to give his report.

RESOLUTIONS

The Reference Committee on Resolutions met for the second time during this Annual Session at 6:30 PM on Friday, April 16, 1971 in the Park Room of the Chase Park-Plaza Hotel. All members were present.

Resolution #13—Method of Reimbursement to Hospitals by Blue Cross

After consultation with members of the Ozarks Medical Society and at their request, the Committee is re-

ferring their Resolution #13 back to the Council for study of the questions raised in the resolution and additional investigation as to the method of Blue Cross-Blue Shield reimbursements of outpatient services.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and was passed.)

Resolution #37—Health Care Foundation of Missouri

Resolution #37, which was presented by Dr. W. M. Komanetsky of St. Louis, was rejected by the Committee.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and carried.)

Resolution #35—Health Maintenance Organizations (HMO)

Resolution #35, which was introduced by Clay County Medical Society, was discussed and examined carefully by the Committee and rejected. However, it is the recommendation of the Committee that the MSMA be urged to engage in an active and educational program to disseminate all available information on HMO's and other health care systems to the medical profession and public.

Mr. Speaker, I move the adoption of this portion of the report.

(The motion was seconded and passed.)

Mr. Speaker, I move the adoption of this supplementary report in its entirety as amended.

(The motion was seconded and carried.)

This concluded the reports of the Reference Committees.

The Speaker then invited the Officers and Councilors to come to the front of the room where the Association Secretary, Dr. John I. Matthews, administered the oath of office.

There being no further business, the Speaker invited President Gerald L. Miller to announce his commission and committee appointments for the 1971-1972 year. Members whose terms had not expired were not mentioned and it is assumed they will continue to serve.

Committee Appointments

Committee on Constitution and By-Laws—Miles White-ner, St. Louis, term to expire in 1974; Kenneth C. Hollweg, Kansas City, Chairman for 1971, 1972.

Committee on Legislative Affairs—John I. Matthews, Jefferson City, Chairman; Gerald L. Miller, Kansas City; Joseph L. Fisher, St. Joseph; Walter T. Gunn, St. Louis; Robert E. Bregant, Jefferson City (one-year terms).

Committee on Planning—Oral B. Crawford, Springfield and James A. Hasek, Mountain Grove, terms to expire in 1976; David N. Kerr, St. Louis, Chairman for 1971-1972.

Committee on Voluntary Health Agencies—William C. Allen, Columbia, term to expire in 1974; Wendell G. Scott, St. Louis, Chairman for 1971-1972.

Commission Appointments

Commission on Public Affairs—Joseph B. Kendis, St. Louis; W. W. Tillman, Springfield; John L. Barnard, Jr.,

Kansas City; Allen Klippel, St. Louis; Joseph A. Zimmerman, Kennett (terms to expire in 1974); Richard Bowles, Liberty, Chairman for 1971-1972.

Commission on Medical Economics, Third Party Medicine and Governmental Relations—Rolla B. Wray, Nevada; C. W. Chastain, Farmington; Robert Lund, St. Louis; Blainze Z. Hibbard, Kansas City; E. W. Allen, Carrollton (terms to expire in 1974); W. J. Ferguson, Sikeston, Chairman for 1971-1972.

Commission on Continuing Education and Health Manpower—Richard A. Fraser, Bonne Terre; R. E. Cantanzaro, St. Louis; W. Thomas Morgan, Jr., West Plains; Paul Anderson, Neosho; W. Wayne Boydston, Odessa (terms to expire in 1974); John F. McDonnell, Kansas City, Chairman for 1971-1972.

Commission on Medical-Legal Affairs—Joseph S. Cope, Lexington; Jerome I. Simon, Clayton; Irving H. Clark, Kansas City; Jack Eidelman, St. Louis; E. J. Schewe, Jr., Columbia (terms to expire in 1974); Daniel L. Yancey, Springfield, Chairman for 1971-1972.

Commission on Interspecialty Medicine (The name of the Representative will be followed by the name of the Alternate)—*Missouri State Allergy Association*, James W. Willoughby, Kansas City, and William T. K. Bryan, St. Louis; *Missouri Society of Anesthesiologists*, G. W. N. Eggers, Jr., Columbia, and Elwyn S. Brown, Kansas City; *ENT-Otolaryngology*, Robert M. Hazen, Kansas City and Oscar T. Pinsker, Kansas City; *Missouri Academy of General Practice*, R. Stacy Long, Kansas City, and George P. Williams, Kansas City; *Missouri Society of Internal Medicine*, Robert S. Mosser, Kansas City, and William D. Hoadley, Kansas City; *St. Louis Society of Neurological Sciences*, Herbert E. Rosenbaum and E. Robert Schultz; *Missouri OB-GYN Society*, Trevor F. Watson, Columbia and William C. Mixson, Kansas City; *Missouri Ophthalmological Society*, Truman B. Schertz, N. Kansas City and H. B. Ivy, Springfield; *Missouri State Orthopedic Association*, Richard E. Lord, St. Louis, and Garth Russell, Columbia; *Missouri Chapter, American Academy of Pediatrics*, Richard D. Blim, Kansas City, and Francis X. Lieb, St. Louis; *Missouri Academy of Psychiatry*, Edmund V. Cowdry, Jr., St. Louis, and Maarten Nieuwenhuizen, Columbia; *Missouri Psychiatric Association*, Edwin D. Wolfgram, St. Louis, and Morton Jacobs, Kansas City; *Missouri Surgical Society*, Cyril J. Costello, St. Louis and Hugh E. Stephenson, Jr., Columbia; *Missouri Chapter, American College of Surgeons*, Joseph C. Peden, Jr., St. Louis and Hugh E. Stephenson, Jr., Columbia. Chairman for 1971-1972—Cyril C. Costello, St. Louis.

President's Advisory Committee—1971-1972—Paul Rother, St. Charles; Paul Koontz, Kansas City; Noel R. Lewis, Springfield; Lee B. Heutel, St. Louis; Albert Cross, Trenton; Robert Fairchild, Kansas City; and a student to be named from the University of Missouri Medical School.

The Speaker requested an invitation for the meeting place of the next Annual Session of the Association. Dr. Allen Chandler of Kansas City introduced the Honorable Dr. Charles B. Wheeler, Jr., Mayor of Kansas City, who invited the MSMA to hold the 1972 Annual Session in Kansas City. The invitation was accepted.

The Speaker announced that the next annual Session of the Missouri State Medical Association will be held on April 6-9, 1972 at the Hotel Muehlebach in Kansas City.

There being no additional business, the Speaker declared the 113th Annual Session adjourned.

REGISTRATION AT THE 113TH ANNUAL SESSION

First Councilor District—36

Arst, H. E., N. Kansas City
 Balhauizen, John, Kansas City
 Bauman, Henry C., Maryville
 Bowles, Richard P., Liberty
 Callman, George, St. Joseph
 Christ, Martin H., St. Joseph
 Conrad, Joseph A., Chillicothe
 Cross, Albert D., Trenton
 Dixon, John R., Brookfield
 Dowell, Donald M., Chillicothe
 Fisher, Joseph L., St. Joseph
 Fotopoulos, Chris K., N. Kansas City
 Fowler, I. Charles, N. Kansas City
 Gearhart, Merriam, Bethany
 Gilliland, Charles E., Cameron
 Goldberg, I. E., Braymer
 Howell, Billy D., Brookfield
 Imes, Elvin D., Maryville
 Kuenizi, Donald E., Kansas City

McDonald, Wilbur P., St. Joseph
 Marsh, James M., St. Joseph
 Martin, John N., St. Joseph
 Matteson, Frank B., Grant City
 Morgan, Troy O., Albany
 Pe, Romualdo L., St. Joseph
 Redmond, William, St. Joseph
 Revare, Paul, Kansas City
 Riddell, Richard V., St. Joseph
 Rost, William B., St. Joseph
 Schertz, Truman B., N. Kansas City
 Shevlin, Charles F., St. Joseph
 Sklenar, Donald E., St. Joseph
 Smith, Robert W., Brookfield
 Sportsman, Weldon L., Smithville
 Wadlow, Ernest E., St. Joseph
 Waggoner, Sharon E., St. Joseph

Second Councilor District—21

Bach, Lysle M., Hannibal
 Barnett, Floyd A., Paris
 Buben, Robert W., Hannibal
 Campbell, James E., Macon
 Chhrs, Clarence C., Moberly
 Collins, Gretchen D., Macon
 Davis, Landis Y., Canton
 Eggleston, Donald E., Macon
 Fischer, Thomas J., Hannibal
 Fleming, Thomas S., Moberly
 Foreman, Phillip B., Hannibal

Freeman, Spencer L., Kirksville
 Grant, Albert J., Hannibal
 Hall, Stanley G., Hannibal
 Harms, Florian L., Salisbury
 Lewellen, Charles H., Louisiana
 Lewis, Glenn E., Louisiana
 Plowman, Edward M., Hannibal
 Streeter, Roderick D., St. Louis
 Thompson, Robert V., Moberly
 Wilcoxon, William B., Bowling Green

Third Councilor District—196

Agasino, Gaudencio L., St. Louis
 Ahabi, Uhd Ul Ahad, St. Louis
 Allen, William E., Jr., St. Louis
 Altheide, J. Paul, St. Louis
 Amado-Ledo, David E., St. Louis
 Auer, Edward T., St. Louis
 Aufderheide, G. Russell, St. Louis
 Babka, Joseph J., St. Louis
 Backer, Mathias H., Jr., St. Louis
 Ballinger, Walter F., St. Louis
 Barden, Frank W., St. Louis
 Bartlett, Robert W., St. Louis
 Bartnick, Mitchel L., St. Louis
 Boldizar, Albert E., St. Louis
 Baula, Armando C., St. Louis
 Behrens, Donald T., St. Louis
 Belwe, Joe E., St. Louis
 Berard, Louis N., St. Louis
 Bergman, Hugo F., St. Louis
 Biddy, Ralph L., St. Louis
 Bigger, John F., Jr., St. Louis
 Block, Arnold S., St. Louis
 Boldizar, Albert E., St. Louis
 Bourke, Thomas E., St. Louis
 Bowerman, Harold H., St. Louis
 Brookes, Robert C., St. Louis
 Brown, Seymour, St. Louis
 Bruce, Helen L., St. Louis
 Bruns, Kenneth, St. Louis
 Bryan, James H., Clayton
 Bryan, William T. K., St. Louis
 Burkhardt, Charles A., Ballwin
 Carranza, Mauro J., Hillsboro
 Cherre, Anthony J., Richmond Heights
 Chipongian, Paul A., Florissant
 Chou, Yen Ping, Koch
 Conrad, Marshall B., St. Louis
 Costen, William S., St. Louis
 Cox, William S., St. Louis
 Crespian, Stephen R., Creve Coeur
 DeVera, Anson E., St. Louis
 Dillard, Burl M., St. Louis
 Doisy, Philip P., St. Louis
 Domke, Herbert, New Bloomfield
 Dorton, Robert K., Clayton
 Doyle, Charles R., St. Louis

Drescher, Emmett B., St. Louis
 Drews, Robert C., Clayton
 Duffy, Francis G., Clayton
 Dunn, Robert E., St. Louis
 Eagleton, Mark D., Clayton
 Edwards, Joseph C., St. Louis
 Elmer, Charles E., St. Louis
 Ernst, Edwin C., Jr., St. Louis
 Evens, Ronald G., St. Louis
 Fallon, Richard H., St. Louis
 Fink, LeRoy L., St. Louis
 Finnegan, Joseph V., St. Louis
 Fitzgerald, Leo P., St. Louis
 Franklin, Max S., St. Louis
 Freund, Samuel J., St. Louis
 Friedman, Paul L., St. Louis
 Friedrich, Ernst R., St. Louis
 Fries, Armand D., St. Louis
 Geise, August W., St. Louis
 Gnade, Albert J., St. Louis
 Goodwin, Donald W., St. Louis
 Grebel, Clement B., St. Louis
 Green, Morton R., St. Louis
 Griffith, John K., St. Louis
 Gulick, Charles R., St. Louis
 Gunn, Walter T., St. Louis
 Haddock, James N., Clayton
 Hammond, John J., St. Louis
 Hampton, Stanley F., St. Louis
 Harell, Alex, St. Louis
 Hartwig, John A., St. Louis
 Hilbert, Paul H., St. Louis
 Jensen, Joshua E., Florissant
 Jones, Augustin, St. Louis
 Jones, James H., St. Louis
 Jones, Otey S., St. Louis
 Jost, Charles A., Florissant
 Joyer, Robert M., St. Louis
 Judd, Donald, St. Louis
 Kaiser, George C., St. Louis
 Keller, Louis, Clayton
 Kellett, John G., St. Louis
 Kelley, Robert W., St. Louis
 Kienzie, Edward C., St. Louis
 Kinsella, Edward D., St. Louis
 Klinkerfuss, George H., St. Louis
 Kneal, E. Ellsworth, St. Louis
 Knowles, R. Raymond, St. Louis
 Komanecky, William M., St. Louis
 Kopp, Leonard J., St. Louis
 Kowert, Edward H., St. Louis

Krause, G. Lynn, Jr., St. Louis
 Kuhlman, Robert E., St. Louis
 Lane, Clinton W., St. Louis
 Langlois, Paul S., St. Louis
 Lawton, Lawrence M., St. Louis
 Lederman, Joseph, St. Louis
 Lewis, J. Eugene, Jr., St. Louis
 Liang, Howard S., St. Louis
 Lieb, Francis X., St. Louis
 Lonsway, Maurice J., St. Louis
 Lowenstein, Paul S., St. Louis
 Luangkesorn, Prasert, St. Louis
 McAdam, C. Rush, St. Louis
 McCloskey, R. Bruce, Webster Groves
 McCool, Stanley G., St. Louis
 Machek, Otakar, St. Louis
 Macon, William L., Jr., St. Louis
 Max, Paul F., St. Louis
 May, Mark, St. Louis
 Merenda, Sam J., St. Louis
 Milster, Clyde R., St. Louis
 Morris, Mary E., St. Louis
 Mudd, J. Gerard, St. Louis
 Mueller, Robert, St. Louis
 Muschany, Norman K., St. Louis
 Nahm, Chung C., St. Louis
 Neilson, Arthur W., St. Louis
 Newman, Percy, St. Louis
 Ognjanov, V. F., St. Louis
 Ogura, Joseph H., St. Louis
 Ohmoto, Masao, St. Louis
 Olmsted, William H., St. Louis
 O'Neal, Lawrence W., St. Louis
 O'Reilly, D. Elliott, St. Louis
 Orenstein, Joseph M., St. Louis
 Paletta, Theodore L., St. Louis
 Payne, Meredith J., St. Louis
 Pennington, F. Eugene, St. Louis
 Pernoud, Flavius G., Richmond Heights
 Portugal, Antonio Q., St. Louis
 Potter, Reese H., St. Louis
 Probstein, Jacob C., St. Louis
 Pruett, Burchard S., St. Louis
 Ramsey, Robert H., St. Louis
 Reich, Harry A., St. Louis
 Reichert, M. C., St. Louis
 Reyes, Jose T., St. Louis
 Ring, Edward M., St. Louis
 Ritter, Hubert A., St. Louis
 Rosell, Louis V., St. Louis
 Roth, John J., St. Louis

Roulhac, George E., St. Louis
 Salanga, P. B., St. Louis
 Sasser, William F., Clayton
 Schnessler, W. P., St. Louis
 Sciortino, John S., St. Louis
 Sessions, Donald G., Des Peres
 Sexton, Daniel L., Clayton
 Shaw, Edward J., St. Louis
 Shackelford, Horace H., St. Louis
 Sherwin, Charles S., Clayton
 Signorelli, Andrew J., St. Louis
 Simon, Jerome I., Clayton
 Sinchai, Pravit, St. Louis
 Smiley, William, St. Louis
 Smith, Kenneth R., Jr., St. Louis
 Smith, Robert S., St. Louis
 Solley, Robert F., St. Louis
 Spoeneman, Walter H., St. Louis
 Stafford, Walter R., Clayton
 Steinberg, Franz U., St. Louis
 Stoneman, William, III, St. Louis
 Strauss, Arthur E., St. Louis
 Swope, Joseph A., Webster Groves
 Tess, Allen, Florissant
 Thomasson, Robert E., St. Louis
 Tichenor, Robert W., St. Louis
 Tjoflat, Oliver E., St. Louis
 Turner, C. M., St. Louis
 Vacca, Joseph B., St. Louis
 Van Matre, R. M., Washington, D. C.
 Virant, John A., St. Louis
 Wacker, Leo L., St. Louis
 Walters, Harold E., St. Louis
 Walters, William H., St. Louis
 Wayne, Sherwyn J., St. Louis
 Weir, Don C., St. Louis
 Westernman, Henry C., St. Louis
 White, Newton B., St. Louis
 Whittico, James M., St. Louis
 Williams, Carol F., St. Louis
 Wilson, A. W., St. Louis
 Wirthlin, Edward H., St. Louis
 Wolfgram, Edwin D., St. Louis
 Yang, Jae H., St. Louis
 Yore, Richard W., St. Louis
 Zink, Oscar C., St. Louis
 Zuckner, Jack, St. Louis
 Zwart, Claude H., St. Louis

Fourth Councilor District—96

Aronson, Abraham, Clayton
 Bailey, William H., St. Louis
 Barragan, Hector, St. Louis
 Berry, Paul T., Troy
 Birenbaum, Aaron, St. Louis
 Boles, C. Read, Clayton
 Bolinske, Robert E., St. Louis
 Burstein, Robert, St. Louis
 Carrier, John A., St. Louis
 Carron, Joseph F., Arnold
 Catanzaro, Rudolph E., St. Louis
 Coldwater, Kenneth B., St. Louis
 Costrino, Joseph A., St. Louis
 Cowdry, Edmund V., St. Louis
 Crespo, Horacio T., Florissant
 Crespo, Remedios R., Florissant
 Cunningham, E. J., St. Louis
 Cutler, Harry, St. Louis
 Damron, Edward O., Elsberry
 Davis, Edgar W., St. Louis
 Del Rosario, Horacio O., St. Louis
 Diehr, Maurice A., St. Louis
 Ecker, D. B., Pacific
 Eidelman, Jack R., St. Louis
 Emerson, Reynolds L., Brentwood
 Estes, Jack M., St. Louis
 Falk, O. P. J., Clayton
 Felder, James P., St. Charles
 Felix, Robert H., St. Louis
 Ferris, Gary W., St. Ann
 Fletes, James W., Normandy
 Floro, Mariano N., Jr., Clayton

Goodman, Nathaniel, St. Louis
 Gray, Walter C., St. Louis
 Hagemann, Paul O., St. Louis
 Hallazgo, Santiago Y., Kirkwood
 Hammes, Roman E., St. Charles
 Hampton, Oscar P., St. Louis
 Hershey, Falls B., St. Louis
 Herzog, Godofredo M., Florissant
 Hetlage, Louis P., Troy
 Hughes, Robert G., St. Louis
 Izmirlian, Grant, Webster Groves
 Jorel, Louis E., Hermann
 Jotte, Richard F., St. Ann
 Kabir, Mohammed A., Clayton
 Kendis, Joseph B., Clayton
 King, E. E., Ferguson
 Klippel, Allen P., St. Louis
 Kopp, Jules H., St. Louis
 Laird, John, St. Louis
 Larkin, Rosemary R., St. Louis
 Lauber, Joseph J., Frontenac
 Lewin, W. Howard, St. Louis
 Magness, Guy N., St. Louis
 Malles, A. Conrad, Ballwin
 Mayer, Robert A., St. Louis
 Meagher, Arthur J., St. Louis
 Meyer, Melvin E., St. Louis
 Middleton, Jerry N., St. Louis
 Miles, Paul W., St. Louis
 Miller, Charles, Kirkwood
 Moellenhoff, Robert W., Washington
 Mueller, Robert J., St. Louis

Nakada, James R., Clayton
Oglesby, Richard B., St. Louis
Parker, Brent M., St. Louis
Pawol, S. E., St. Louis
Peterson, Frederick D., St.
Louis
Poggemeier, William H., St.
Charles
Racadio, Severo M., Kirkwood
Roblee, Melvin A., St. Louis
Rice, Carl E., Crystal City
Richardson, George A., Union
Rother, Paul H., St. Charles
Ruhling, Rudy, St. Louis
Rutledge, John F., Festus
Schwartz, Melvin M., St. Louis
Shea, James G., Gerald
Sisk, James C., St. Louis

Fifth Councilor District—67

Allen, William C., Columbia
Baker, A. S., Columbia
Black, Samuel P. W., Columbia
Bloom, William A., Fayette
Boyce, John M., Mexico
Bregant, Robert E., Jefferson
City
Bumgarner, Roger W.,
Columbia
Byland, Samuel J., Wellsville
Cochran, Donald O., Columbia
Cooper, Charles W., Jefferson
City
Cope, James C., Columbia
Cox, William A., Jefferson City
Davis, David, Columbia
Durst, Henry, Fulton
Ekern, H. Peter, Mexico
Exon, C. Stuart, Jefferson City
Garner, Lynn M., Jefferson City
Gaunt, William D., Columbia
Gordon, James S., Jefferson City
Groe, George, Fulton
Guhleman, Henry V., Jefferson
City
Hall, C. Robert, Versailles
Hardwicke, Henry M., Ashland
Hart, William M., Columbia
Jackson, Robert L., Columbia
Jolly, Benjamin N., Mexico
Jolly, William H., Mexico
Lee, Yeu-Tsu N., Columbia
Lockwick, Gwilym S., Columbia
Logue, John T., Columbia
Lyle, Robert R., Versailles
Marco, Philip J., Columbia
Matthews, John L., Jefferson
City
Mayer, William D., Columbia
Metzgar, Marshall T., Columbia

Steiner, Alexander J., St. Louis
Sutter, Richard A., St. Louis
Teiber, Fred W., St. Louis
Toon, Thomas J., St. Louis
Utley, James H., St. Louis
Valach, Frank J., St. Louis
Vatterott, Paul B., St. Louis
Vitale, Anthony J., St. Louis
Vitale, Nicholas S., St. Louis
Weber, Sol, Clayton
Whitener, Miles C., Overland
Whitener, Paul R., St. Ann
Wipfler, Earl J., Jr., St. Charles
Wulff, George J. L., Jr., St.
Louis
Yap, Mardonio J. R., Chesterfield
Zeigler, Joseph M., Florissant

Mitchell, Franklin L., Columbia
Moranville, Benedict A.,
Columbia
Neal, M. Pinson, Columbia
Nieuwenhuizen, Maartin,
Columbia
Pingleton, William B., Columbia
Rall, Kenneth L., Columbia
Russell, Joseph P., Jefferson
City
Sanders, Jack S., Jefferson City
Schmidt, J. H., Jefferson City
See, William B., Columbia
Shaw, William J., Fayette
Shull, G. Donald, Jefferson City
Sights, Warren P., Columbia
Stauffer, Harry B., Jefferson
City
Stephenson, Hugh E., Jr.,
Columbia
Stewart, Wellington B., Columbia
Stewart, William J., Columbia
Stuart, Byron M., Boonville
Summers, Joseph S., Jr.,
Jefferson City
Sydow, Henry A., Fulton
Tanner, Robert H., Jefferson
City
Thomas, Horace E., Columbia
Wakerlin, G. E., Columbia
Walters, John H., Columbia
Walters, Laura, Columbia
Washburn, J. Loren, Versailles
Watson, Trevor F., Columbia
Watts, Byron E., Jefferson City
Weiss, James M. A., Columbia
Wilson, George P., Columbia
Winn, George W., Boonville
Wolcott, Lester E., Columbia

Sixth Councilor District—24

Aiken, George A., Marshall
Boger, James W., Sedalia
Boydston, W. Wayne, Odessa
Boydston, Catherine, Odessa
Bradshaw, W. D., Clinton
Braverman, Elliot M., Sedalia
Brazos, John C., Smithton
Campbell, Albert J., Sedalia
Crayton, Billy C., Waverly
Damron, Oscar H., Warrensburg
Eklund, Alfred W., Pleasant
Hill
Hansen, Arthur L., Butler
Huber, K. H., Richmond

Kelling, Jordan, Waverly
King, Richard H., Clinton
Lederer, Charles M.,
Warrensburg
McCorkle, E. Lee, Marshall
Magee, Robert L., Eldorado
Springs
Pascoe, James J., Nevada
Reid, James A., Marshall
Stewart, Robert H., Sedalia
Walker, Hugh B., Clinton
Worley, Charles A., Sweet
Springs
Wray, Rolla B., Nevada

Seventh Councilor District—57

Anderson, Raymond B.,
Shawnee Mission, Kan.
Asher, A. Graham, Kansas City
Barnard, John L., Kansas City
Benoit, Hector W., Jr., Kansas
City
Brown, Robert S., Kansas City
Buhler, Victor B., Kansas City
Calovich, Emery R., Kansas
City
Chandler, Robert A., Kansas
City
Clothier, Robert W.,
Independence
Crow, Martin L., Kansas City
Curtis, Calvin J., Kansas City
Dorsch, Ervin H., Independence
Engelmann, Calvin E., Kansas
City
Farney, Jacob P., Kansas City

Fowler, Fred D., Kansas City
Gist, William W., Kansas City
Goldman, Stanley L., Kansas
City
Gordon, Morris P., Kansas City
Griffith, John A., Kansas City
Hollweg, Kenneth C., Kansas
City
Hyde, Lawrence L., Kansas City
Jonas, Harry S., Independence
Jung, Christopher H., Kansas
City
Landis, George K., Kansas City
Leo, William A., Kansas City
Link, Vance E., Independence
Linville, Howard E., Kansas
City
Lytton, George J., Kansas City
McCanse, Andrew, Kansas City
McKee, Wallace P., Shawnee
Mission, Kan.

Mayer, John H., Jr., Shawnee
Mission, Kan.
Miles, George O., Kansas City
Miller, Gerald L., Kansas City
Mitchell, John D., Kansas City
Nickson, Charles E., Jr., Kansas
City
Nicolay, Kenneth S., Kansas
City
Noback, Richardson K., Kansas
City
O'Malley, James F., Kansas City
Peterson, Carl M., Kansas City
Rubin, Sidney, Kansas City
Sabates, Felix N., Kansas City
Sauer, Gordon C., Kansas City
Slickman, Robert A., Kansas City
Smith, Othello D., Kansas City
Sneid, Philip, Kansas City
Spencer, Donald, Raytown

Stacey, Wallace R.,
Independence
Stelmach, Walter J., Kansas
City
Stockton, Raymond W., Kansas
City
Thomas, Christopher Y., Kansas
City
Underwood, Dick H., Kansas
City
Vaughn, James W., Kansas City
Wheeler, Charles B., Kansas
City
White, Stoughton F., Shawnee
Mission, Kan.
Williams, George P., Kansas
City
Willoughby, James W., Kansas
City
Young, Paul R., Kansas City

Eighth Councilor District—45

Anthony, Dallas D., Springfield
Ashley, Thomas E., Springfield
Back, Donald K., Springfield
Bareis, Robert J., Marshfield
Blankenship, George W.,
Neosho
Bonebrake, M. D., Springfield
Brown, James T., Springfield
Burch, John E., Joplin
Chase, Ned B., Joplin
Christianson, Charles S., Mt.
Vernon
Clary, William F., Springfield
Cohle, Richard R., Carthage
Elkins, Ronald F., Springfield
Esther, John R., Joplin
Ferrell, Thomas F., Springfield
German, Walter A., Springfield
Glover, Kenneth, Mt. Vernon
Hamilton, William P., Aurora
Hills, Joseph E., Springfield
Ivy, Henry B., Springfield
Jones, Harold L., Springfield
Kenney, Roy E., Neosho
Lockhart, Charles E.,
Springfield

McAlhany, Howard J.,
Springfield
McCraw, Doyle C., Bolivar
McNeel, Lee A., Greenfield
Macdonnell, Thomas M.,
Marshfield
Maher, Robert W., Springfield
Maple, Frank M., Springfield
Merideth, Mary Jane, Cassville
Peterson, Stanley S., Springfield
Post, Winfred L., Joplin
Powell, Edwin M., Springfield
Roper, Stanley D., Ozark
Schaeffer, Edward M.,
Springfield
Schmidt, Herbert J., Joplin
Schroff, Carle H., Springfield
Smith, W. Russell, Carthage
Spalding, David C., Springfield
Tarrasch, Ernest L., Springfield
Walker, William M., Springfield
Williams, John W., Springfield
Williams, John W., Jr.,
Springfield
Wilson, Roy E., Springfield
Wyrsh, Leo M., Springfield

Ninth Councilor District—9

Bass, Billy J., Salem
Cooper, Charles W., Thayer
Fowler, Marvin L., West Plains
Froelich, R. W., Lebanon
Hasek, James A., Mountain
Grove

Pendell, Paul W., Rolla
Smith, C. Franklin, Willow
Springs
Spears, Joe L., Cabool
Stricker, Emil A., St. James

Tenth Councilor District—35

Alyea, J. O., Cape Girardeau
Arguelles, Calixto R.,
Farmington
Burford, Edwin K., Cape
Girardeau
Camp, Richard V., Jr., Poplar
Bluff
Canlas, Emilio M., Poplar Bluff
Cash, Charles R., Kennett
Chapman, Jean A., Cape
Girardeau
Chastain, Charles W.,
Farmington
Cook, O. W., Caruthersville
Crowe, John T., Cape Girardeau
Dettmer, Robert F., Ironton
Estes, Albert M., Cape Girardeau
Farmer, Norma D., Farmington
Ferguson, Wilson J., Sikeston
Fraser, Richard A., Bonne Terre
Frazier, Robert L., Charleston
Hansbrough, Eugene T., Poplar
Bluff
Heeb, Max A., Sikeston
Hoia, W. Alexander, Poplar
Bluff

Holcomb, John K., Cape
Girardeau
Jung, J. M., Columbia
Kasten, Melvin C., Cape
Girardeau
Ladyman, George H., Poplar
Bluff
McGinty, Charles P., Cape
Girardeau
Miller, David V., Poplar Bluff
Mullen, Jack, Bonne Terre
Ramirez, Ricardo M., Poplar
Bluff
Rapp, Harold B., Cape
Girardeau
Ritter, C. John, Cape Girardeau
Ritter, Raymond A., Cape
Girardeau
Ruff, T. Eugene, Poplar Bluff
Shoss, Milton, Cape Girardeau
Talbert, Clifford R., Cape
Girardeau
Taylor, Van W., Bonne Terre
Turner, Kirby L., Potosi

Guest Physicians—59

Ainsworth, Thomas H., Chicago,
Ill.
Ajans, Zaki A., Columbia
Arat, Metin, Farmington
Baker, Saul P., St. Louis
Bedwell, T. C., Baltimore, Md.
Bergsma, Donald R., St. Louis
Bertrand, Claude, Montreal,
Canada

Brennan, Daniel, St. Louis
Caldwell, John K., Kansas City
Cartwright, Robert S., Columbia
Chapel, James L., Columbia
Cherry, James, St. Louis
Cook, W. H., Alamo, Calif.
Dua, Sottan, St. Louis
English, G., Columbia

Estrada, Tulio, Columbia
Felker, Gary, Columbia
Giannellis, C., St. Louis
Goldstein, Allen, Columbia
Hall, Robert W., Columbia
Hamtil, Lawrence W., Prairie
Village, Kan.
Heidenry, Robert, St. Louis
Heilbrunn, Ilse, Wadsworth,
Kan.
Ireland, William W., Ottumwa,
Iowa
Jarudi, Nabil J., Columbia
Johnson, Eric C., Bellingham,
Wash.

Koehler, P. Ruben, Salt Lake
City, Utah
Krueger, Joseph L., Columbia
Lamberti, Joseph, Columbia
Lee, Vin-Tang, Columbia
Linde, R., Columbia
McCurry, J. H., St. Louis
McGonigle, J. P., Ballwin
Marco, Joseph, Kirkwood
Melia, Bernard, Prairie Village,
Kan.
Mendelson, Jack, Weston, Mass.
Morgan, Clyde N., Abilene, Tex.
Morrissey, John F., Madison,
Wis.

Owens, J. C., Denver, Colo.
Parsons, Robert W., Washington,
D. C.
Patton, Douglas S., Crestwood
Plager, Stephan A., Lebanon,
Ill.
Rand, Frederiksen, St. Louis
Reynolds, William E., New
York, N. Y.
Ritter, E. L., Prescott, Ariz.
Schlemmer, Roger, Kansas City,
Kan.
Schmidt, Marvin, Canton, Ill.
Shearer, Marguerite R., St.
Louis

Shearer, Marshall L., Jr., St.
Louis
Shurtz, Carl A., Columbia
Simonds, John F., Columbia
Simpson, Reed M., Sheboygan,
Wis.
Sugar, H. Saul, Southfield, Mich.
Talaban, R. D., St. Louis
Tanne, Emanuel, St. Louis
Warren, James C., Kansas City,
Kan.
Wilbois, Ronald P., St. Louis
Wolff, Gerald, St. Louis
Wurzel, Edward M., Alexandria,
Va.

There were 586 members, 59 guest physicians, 148 exhibitors, 120 Woman's Auxiliary members and 33 guests registered. Total registration was 946.

113TH ANNUAL SESSION EXHIBITORS

Abbott Laboratories, North Chicago, Ill.
American Medical Facilities Corporation, St. Louis
Ames Company, Division Miles Laboratories, Elkhart,
Ind.
Apache Corporation, Minneapolis, Minn.
The Arthritis Foundation, Eastern Missouri Chapter, St.
Louis
Astra Pharmaceutical Products, Inc., Worcester, Mass.
Ayerst Laboratories, New York, N. Y.

Bi-State Regional Medical Program, Diagnostic-Demon-
stration Stroke Unit, St. Louis
Blue Cross-Blue Shield, St. Louis
Blue Line Chemical Company, St. Louis
Bock Pharmacal Company, St. Louis
Bristol Laboratories, Syracuse, N. Y.
Casualty Indemnity Exchange, Denver, Colo.
Clayton Commodity Service, Inc., St. Louis
Coca-Cola USA, Chicago, Ill.
Cole Pharmacal Company, Inc., St. Louis
Dairy Council—St. Louis District, St. Louis
Data Service Agency, Inc., St. Louis
Diagnostic, Inc., Indianapolis, Ind.
Dictaphone Corporation, Rye, N. Y.
The Doyle Pharmaceutical Company, Minneapolis,
Minn.
Eaton Laboratories, Norwich, N. Y.
Gentec Hospital Supply Company, St. Louis
Health Careers, Missouri Hospital Association, Missouri
Regional Medical Program and Missouri State Medi-
cal Association
Hoechst Pharmaceutical Company, Somerville, N. J.
Homemakers—Upjohn, St. Louis
Knoll Pharmaceutical Company, Orange, N. J.
Lakeside Laboratories, Inc., Milwaukee, Wis.
Eli Lilly and Company, Indianapolis, Ind.
The Medical Protective Company, Fort Wayne, Ind.
Medicare Pharmacies, Inc., St. Louis
Merck Sharp & Dohme, West Point, Pa.
Missouri Regional Medical Program, Columbia
Ortho Pharmaceutical Corporation, Raritan, N. J.
Parke, Davis & Company, Detroit, Mich.
Rowell Laboratories, Inc., Baudette, Minn.
Sandoz Pharmaceuticals, Hanover, N. J.
W. B. Saunders Company, Philadelphia, Pa.
Schering Corporation, Union, N. J.
Scholastic Systems Inc., Hackensack, N. J.
C. D. Searle & Company, Chicago, Ill.
Seven-Up Bottling Company, St. Louis
E. R. Squibb & Sons, Inc., New York, N. Y.
Stuart Pharmaceuticals/Division of Atlas Chemical In-
dustries, Inc., Pasadena, Cal.
The Upjohn Company, Kalamazoo, Mich.
Woman's Auxiliary to Missouri State Medical Associa-
tion
Zimmer-Ernst Associates, St. Louis

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Missouri State Medical Foundation

Minutes of the Annual Meeting
Hotel Chase, St. Louis
Friday, April 16, 1971

The meeting was called to order by Paul R. Whitener, M.D., President. A quorum was declared present. Dr. Whitener stated that the minutes of the 1970 Annual Meeting in Kansas City, which immediately followed the Friday afternoon, April 3 Session of the MSMA House of Delegates, had been published in the July, 1970 issue of MISSOURI MEDICINE. It was moved and seconded that the minutes of the 1970 meeting be approved as published. The motion carried.

Dr. Whitener directed attention to the financial statement of the Foundation as of December 31, 1970, a copy of which was offered to those in attendance and which reads as follows:

FINANCIAL STATEMENT FOR THE YEAR 1970

LENNERTSON & COMPANY
CERTIFIED PUBLIC ACCOUNTANTS

ST. LOUIS, MISSOURI 63103

January 28, 1971

Missouri State Medical Foundation
515 East High Street
Jefferson City, Mo. 65101

Gentlemen:

An examination was made of Balance Sheet of the Missouri State Medical Foundation, a non-profit Missouri corporation, for the year 1970. The Balance Sheet at December 31, 1970 is on a cash basis and the additions for the year are set forth in Exhibit A.

Recorded receipts for the year were traced in total into the bank account as deposits and paid checks were seen for the disbursements. A direct confirmation was received from the depositor in verification of the cash balances on deposit.

A summary of the loans to medical students follows:

Loans Receivable January 1, 1970	\$295,571.99
Loans made during the year	52,800.00
Total	\$348,371.99
Less Loan Repayments	20,690.79
Loans Receivable December 31, 1970	\$327,681.20

Positive confirmations were mailed on the 237 individual loans stating their principal loan balances as of August 31, 1970. As of January 15, 1971, 227 confirmations have been returned confirming their principal loan balances at 8/31/70 of \$325,015.14 out of total loans of \$339,749.32. One additional loan was made after Aug. 31, 1970 in the amount of \$750.00 which has not been confirmed. Interest income on loans is recorded on a cash basis and the amount received in 1970 was \$4,026.78. Accrued interest on outstanding loans at December 31, 1970 amounted to \$25,389.79 and is not included in the loan balances in Exhibit A.

Interest received on the savings account and the certificate of deposit amounted to \$1,219.60. The certificate of deposit due January 6, 1971 was renewed for six months and interest of \$954.16 was received.

The Missouri State Medical Association paid expenses for the Foundation as follows:

State Registration Fee	\$ 1.00
Professional Fees	1,100.00
Insurance Premium	1,927.34
Printing	116.41
Total	\$3,144.75

These amounts have not been recorded as receipts and disbursements on the records of the Foundation.

U. S. Treasury Department form 990A has been prepared for the year 1970 and is due for filing on May 15, 1971.

We have examined the Balance Sheet of Missouri State Medical Foundation as of December 31, 1970, prepared on the cash basis. The examination was made in accordance with generally accepted auditing standards and include such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. Since the Balance Sheet is on the cash basis, no opinion is expressed on the attached statement as accrued interest on loans of \$25,389.79 and \$954.16 of accrued interest on certificate of deposit is not shown. In addition no reserve for uncollectable loans has been provided. The Balance Sheet is prepared on a basis consistent with that of the preceding year.

Yours very truly,
LENNERTSON & Co.
Certified Public Accountants

EXHIBIT A

MISSOURI STATE MEDICAL FOUNDATION

Balance Sheet (Cash Basis), December 31, 1970

<i>Assets</i>	
Cash in Checking Account	\$ 40,054.60
Savings Account	6,512.07
Certificate of Deposit due Jan. 6, 1971	19,083.51
Loans Receivable from Medical Students	327,681.20
Total Assets	\$393,331.38
<i>Fund Reserve</i>	
Balance January 1, 1970	\$347,270.67
<i>Cash Additions for the Year 1970</i>	
Interest on Loans	\$ 4,026.78
Interest on Bank Deposits	1,219.60
Contributions (see below)	4,328.50
Assessment of Members—Active	
\$10.00; Junior \$5.00	36,485.83
Total for year 1970	46,060.71
Total Reserve	\$393,331.38
<i>Contributions</i>	
John N. Martin, M.D., St. Joseph, Mo.	\$ 225.00
South Central Counties Medical Society	200.00
Woman's Auxiliary to MSMA	1,353.00
Long's Drug Store, Boonville, Mo.	200.00
Foster's Drug Store, Boonville, Mo.	100.00
Hirsch Rexall Drugs, Boonville, Mo.	150.00
Miller's Medical Arts Pharmacy, Inc., Boonville, Mo.	175.00
Boonville Medical Group, Boonville, Mo.	200.00
St. Louis County Medical Society	100.00
Max S. Franklin, M.D., St. Louis, Mo.	100.00
Albert D. Cross, M.D., Trenton, Mo.	100.00
Doyle C. McCraw, M.D., Bolivar, Mo.	100.00
Hector W. Benoit, Jr., M.D., Kansas City, Mo.	100.00
Buchanan County Medical Society Auxiliary, St. Joseph, Mo.	370.00
Buchanan County Med. Society Auxiliary (Christmas Project), St. Joseph, Mo.	207.50
Paul R. Whitener, M.D., St. Ann, Mo.	250.00
Sub-total	\$3,930.50
Contributions under \$100 each	398.00
Total Contributions	\$4,328.50

Dr. Whitener then referred to the resolution proposed by the MSMF Board of Trustees and the MSMA Council for extension of dues assessment for the years 1972, 1973 and 1974. He reported that the resolution had been approved by the House of Delegates at the 113th Annual Session of the MSMA.

Speaking for the MSMF, he then expressed appreciation for the generous contributions and support received during the past year from the Woman's Auxiliary to the MSMA. He also commended the

physicians from Boonville for their contributions and support and stated that they have set a fine example for other physicians to follow.

Dr. Whitener then called for the next order of business which was election to the Board of Trustees. In the absence of Dr. David Kerr, he appointed Dr. Miles Whitener to serve as Chairman of the Nominating Committee.

Dr. Albert D. Cross was reelected by unanimous vote to serve a five-year term on the Board of Trustees of the MSMF, a nonprofit organization which

makes educational loans to medical students who are residents of Missouri.

The President then called for the introduction of new business. He suggested that a different meeting time for the MSMF be considered for the future. He then announced that a short meeting of the MSMF Board of Trustees would immediately follow adjournment of the Annual Meeting of the Missouri State Medical Foundation.

There being no further business, the meeting was adjourned.

Minutes of the MSMF Board of Trustees Meeting Chase Hotel Friday, April 16, 1971

The meeting of the Board of Trustees of the MSMF was called to order by Paul R. Whitener, M.D., President, immediately following the adjournment of the Annual Meeting.

The first order of business was the election of officers. In the absence of Dr. David Kerr, Dr. Miles Whitener served as Chairman of the Nominating Committee.

Since he has retired from the practice of medicine and is out of the state for a part of each year, Dr. Paul R. Whitener asked that his name be withheld from nomination as President of the MSMF. Dr. Miles Whitener then announced that Dr. Byron M. Stuart had been nominated as President, Dr. Max Franklin had been nominated as Vice-President and Dr. Charles R. Doyle had been renominated as Secretary-Treasurer by the Nominating Committee. It was moved, seconded and approved that these officers be elected by acclamation.

Mr. Thomas P. Fox was reappointed Assistant Secretary and will continue to assist in the administration of the Foundation's program.

Dr. Whitener then turned the gavel over to Dr. Stuart.

The next order of business was discussion of a method for solicitation of contributions from the full membership of the MSMA. It was reported that in 1970-1971, solicitation letters were published in MISSOURI MEDICINE with resulting contributions of \$4,300. It was pointed out that for the second year,

results from the published letter have exceeded contributions made in previous years in response to a mailing to the full membership. After discussion, it was decided that solicitation for contributions be made through MISSOURI MEDICINE in 1971-1972. It also was suggested that emphasis be placed on the appropriateness of contributions as memorials.

After a discussion of various types of insurance for loans extended to medical students by the MSMF, it was moved and approved that Mr. Fox conduct a survey of various insurantee possibilities, compare the programs and report his findings back to the Board of Trustees.

Dr. Paul Whitener further moved that if an advantageous insurance program is not available, the MSMF carry its own insurance. The motion was seconded and approved.

Mr. Fox then reported on the present status of possible reclassification by the IRS and the possibility of MSMF assuming its own operating costs. It was moved, seconded and approved that these questions be resolved by President Stuart conferring with the MSMA Council at the time a decision is made by the IRS.

A motion to express appreciation to Dr. Paul Whitener for his guidance and contributions to MSMF as President was unanimously approved.

There being no further business, the meeting was adjourned.

IMPROVED ACCIDENT & HEALTH PROGRAMS

The Disability Income Policy sponsored by the Missouri State Medical Association since 1943 has now been made **GUARANTEED RENEWABLE** and income benefits are available up to \$300.00 weekly to members under age 56 subject to acceptance by the Company.

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The Council Reports

Meeting of April 18, 1971

Gerald L. Miller, M.D., Kansas City, President, called the meeting to order. Those attending were Drs. Miller; Joseph L. Fisher, St. Joseph; Walter T. Gunn, St. Louis; John I. Matthews, Jefferson City; Charles R. Gulick, St. Louis; John N. Martin, St. Joseph; Max S. Franklin, St. Louis; Louis P. Hetlage, Troy; James C. Cope, Columbia; William D. Bradshaw, Clinton; R. Allen Chandler, Kansas City; Howard J. McAlhany, Springfield; E. A. Stricker, St. James; Eugene T. Hansbrough, Poplar Bluff; Messrs. John W. Noble, Kennett; Hollister S. Smith, St. Louis; Ray McIntyre, Bob Carroll and Royal O. Cooper, Staff, Jefferson City.

Doctor Miller opened the meeting by introducing and welcoming the new Councilors, who are Dr. Max S. Franklin, Third Councilor District, and Dr. Louis P. Hetlage, Fourth Councilor District. Congratulations also were extended to Councilors from the Second, Sixth, Eighth and Tenth Districts who were reelected.

Dr. E. A. Stricker was nominated and elected Chairman of the Council by unanimous vote and, thereby, became the presiding officer. He thanked the Council for the honor of chairmanship and asked for their support and assistance during the coming year.

Dr. James C. Cope was nominated and unanimously elected Vice-Chairman of the Council. Dr. Charles R. Gulick was nominated and unanimously elected Treasurer and Dr. John I. Matthews was nominated and elected Secretary by acclamation.

Doctor Cope then asked for Council consideration of the following recommendations:

1. Committee Reports:

All reports shall first go to the state office in writing. The Chairman shall publish the report in summary to the members of the Council prior to the meeting at which the report is to be considered. Committee Chairman shall appear before the Council only at the request of the Chairman of the Council or the Chairman of the Commission or Committee.

2. Report of AMA Delegates:

The Senior Delegate or his designee shall report to the Council at least twice yearly or more often as the Chairman may direct.

3. Executive Sessions:

At the end of each working session of the Council, such as the customary Saturday morning session, the Saturday afternoon session and the Sunday morning session, the Council will go into Executive Session.

4. Voting:

Any item that did not appear on the agenda will be acted upon during the Executive Session next after the introduction of the item.

Discussion followed regarding the above four recommendations and it was suggested that perhaps staff should send a letter to all Commission and Committee Chairmen regarding Recommendation No. 1, so they will understand that their reports must be abstracted and sent to the Council prior to their appearing before the Council. After further discussion, on motion of Doctor Bradshaw, duly seconded, the Council adopted all four of the above recommendations.

NEXT COUNCIL MEETING

The next meeting of the Council will be held on June 5-6, 1971 at the Ramada Inn, Jefferson City beginning at 9:00 AM. On motion of Doctor Martin, duly seconded, it was agreed that the Council dispense with the Sunday noon luncheon following the Council meeting. Suggestions also were made regarding the length of the noon meal on Saturday. It was suggested that a buffet on Saturday would not be as time-consuming.

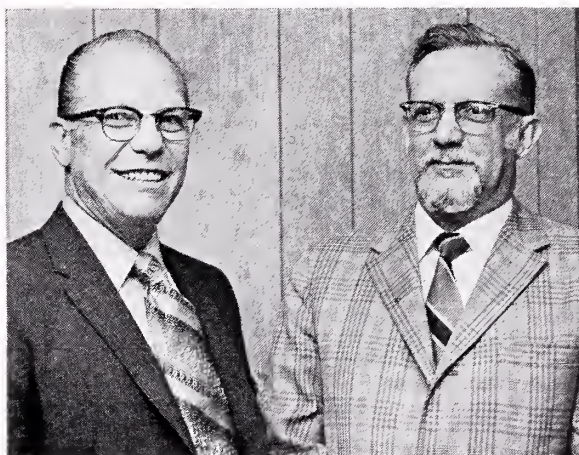
COMMUNICATIONS

Doctor Bradshaw indicated that after hearing some of the discussion in Reference Committees, he felt that professional liaison was not what it should be and that somehow a better system of disseminating information needs to be developed.

Doctor Chandler stated that unfortunately items that are sent in written form are not always read and many things appearing in the Journal are not read as closely as they should be. He suggested that perhaps some type of task force or speakers' bureau should be formed to discuss matters of great importance with physician groups, individual physicians, etc., so they will be informed.

Doctor Matthews indicated that Councilor District meetings are being held, but many times are not as well attended as we want them to be. He supported Doctor Chandler's idea of having a team who would attend hospital staff meetings, etc. to disseminate important information to them.

Doctor Miller indicated that lack of communication is a problem which exists in all areas and not specifically with the Foundation and urged that the Council take some action regarding getting information to the members of the Association. He suggested that a committee be appointed to study this communication problem, to



At the MSMA Council meeting on April 18, Dr. E. A. Stricker, St. James (left) was elected Chairman, and Dr. James C. Cope, Columbia, was elected Vice-Chairman. Doctor Stricker is Councilor for the Ninth District and Doctor Cope is Councilor for the Fifth District.

explore all modalities and to bring back to the Council possible solutions to the problem.

Doctor Hansbrough stated that he felt the communications problem is the responsibility of the Councilors in their particular areas, realizing that the problems would vary between the rural and metropolitan areas.

Doctor Gunn pointed out that matters of significant importance are published in his local Society Bulletin. However, many times these bulletins are not read. He further stated that there are 33 hospitals in metropolitan St. Louis and did not feel it would be feasible to attend all staff meetings.

Doctor Cope suggested that when a matter arises which should be disseminated to the membership, that audio-visual aids be made available for the Councilor's use in getting the information to physicians in his particular district. He stated that perhaps in the metropolitan areas the Councilors would need to recruit several other physicians to assist them. He suggested establishing such a department in our state office to draw up audio-visual aids to help in professional relations. He further stated that this is a problem that should be studied in depth.

Doctor Bradshaw moved for the appointment of a committee of the Council to do an in-depth study regarding communications and for a report back to the Council. Motion was duly seconded and carried. The Chairman appointed the following Councilors to this committee: Drs. Max S. Franklin, Chairman; James C. Cope; Howard J. McAlhany and E. T. Hansbrough.

Several of the Councilors indicated that they felt their district physicians were well informed regarding the

Foundation, but also felt there was a need for a study concerning professional communication.

Doctor Hetlage stated that in view of the excellent job done by the Reference Committee on Resolutions, he felt a letter expressing our appreciation was in order. It was agreed that the staff should send a letter to this effect to the Reference Committee.

Mr. Hollister Smith indicated that he is having a meeting of Medical Society Executive Secretaries and has invited Executive Secretaries from nine surrounding states. This meeting will be held at the St. Louis Medical Society office on May 1 from 10 AM to 3:30 PM. Items of mutual interest will be discussed, such as Comprehensive Health Planning, Regional Medical Programs, etc. The Chairman asked Mr. Smith if he would give a brief report of this meeting to the Council at their June meeting.

Doctor Cope indicated that he felt the Woman's Auxiliary did an excellent job on their booth display at the Annual Session and suggested that a letter of commendation be sent to Mrs. M. T. Metzgar and Mrs. William M. Walker regarding Booth #19. It was agreed that a letter be sent to them commending them for their fine display.

Doctor Miller indicated that he would like to acknowledge that officers, councilors and staff are extremely aware of the many problems facing medicine and indicated to the Chairman of the Council that he would receive their wholehearted support.

Doctor Fisher thanked the officers, councilors and staff for their help and support and indicated that he felt the Council would have to seriously consider enlarging the staff in view of the annual sessions of the Legislature.

The meeting adjourned at 10:20 AM.

CLASSIFIED ADS

FOR SALE—Large general surgical practice, St. Joseph, Missouri (Metrop. area-100,000) including modern furnishings, equipment, files and library; untimely death in prime of life; reasonable price—installments available. Please inquire David H. Morton, Attorney, Corby Building, St. Joseph, Missouri 64501. Collect calls accepted AC 816-232-6787.

WANTED—Full-time industrial physician for permanent employment in Remington Arms Company plant in Lonoke, Arkansas. Career position. Excellent opportunity. General practice background acceptable. Salary open. An equal opportunity employer. Write or call collect to Dr. E. M. Marks, M.D., Medical Director, Remington Arms Co., Inc., 939 Barnum Avenue, Bridgeport, Connecticut 06602, (203 333-1112).

OPPORTUNITY—to open practice in Missouri Ozarks. Modern nursing home and well-equipped, 60-bed modern hospital with full staff privileges available. Cabool has newly-paved airport; AAA school system; beautiful, new 9-hole golf course; tennis courts; heated pool; club house. Good hunting, e.g., deer, turkey, dove, quail. Good fishing and boating. Present doctor will help introduce and will share calls and week-end duties. Write to Physician, Box 40, Cabool, Mo. 65689.

WANTED—Young, dynamic, duck and goose hunter, spelunker, canoe floater and camper. Also must occa-

sionally practice with Internal Medicine Group of Cape Girardeau, Missouri. We are at present a group of four representing general internal medicine, cardiology, gastroenterology and allergy. Gradual expansion planned to seven or eight. Dynamic practice in an All American City (Look Magazine) in a dynamic state! Particularly interested in internist with hematology and/or oncology subspecialty. Others will be given strong consideration. Moving into new building in multispecialty Doctors' Park. Rapid progress to full partnership in two years. Write immediately. Charles F. Bahn, M.D., Internal Medicine Group of Cape Girardeau, 1902 Broadway, Cape Girardeau, Missouri 63701.

WANTED—General Practitioner to join two young doctors in clinic with built-in practice. Year old, 23-bed hospital and 41-bed convalescent home serving 7,500 persons in Central Wisconsin, away from big-city living. Call collect 414-622-3254, Dr. R. Kjenvet or Dr. R. Wichman.

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The 114th
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Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating ma-

chinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impend-

ing depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances, syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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Missouri Medicine

JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION



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**114th Annual Session
April 6-9, 1972 Kansas City**

Missouri Medicine

THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION

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Joseph V. Finnegan
Editor

Purposes of Association

THE PURPOSES of the Missouri State Medical Association are to bring into compact organization the entire medical profession of the State of Missouri with the view of the extension of medical knowledge and the advancement of medical science, to promote and elevate the standards of medical education and the enactment and enforcement of just medical and public health laws, to encourage friendly intercourse among physicians, to guard and sustain measures of interest and advantage to the public and the medical profession and to promote science, knowledge and skill among the medical profession.

*1950 MSMA Handbook
Centennial Issue*

How to Use This Directory

This Directory includes two rosters of physicians who are members of the Missouri State Medical Association.

The **Roster of Members by County Societies** on page 542 lists each county medical society in alphabetical order, the members of each county medical society and their **street addresses**.

If you are seeking a street address and do not know to which county medical society a member belongs, turn to the **Alphabetical Roster of Members** on page 527 which lists that member's name and the community in which he lives.

Locate the name of that community in the **Guide to County Medical Societies** on page 525 which tells you the county in which that community is located and the county medical society to which that member normally would belong.

The **Roster for the Woman's Auxiliary to the MSMA** on Page 564 lists the officers, directors, committee chairmen, MSMA Advisory Council, presidents of county auxiliaries, districts, state past-presidents and members of each county auxiliary.

For other departments, please refer to the table of contents on the cover page.



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1971-1972 Officers



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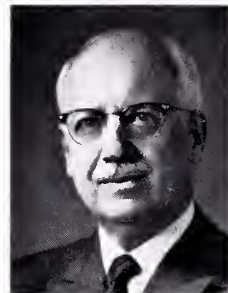
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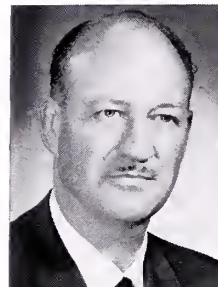
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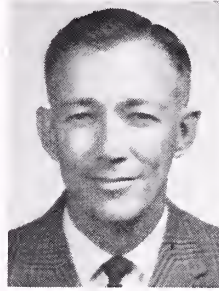


Arthur W. Neilson

Alternate Delegates



James C. Sisk

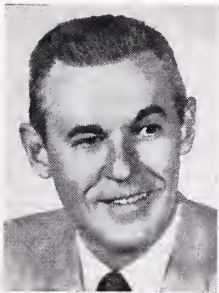
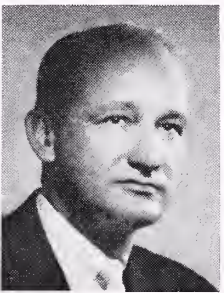
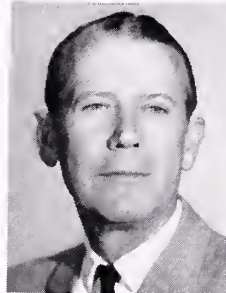


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Jr.

Robert W. Kelley

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2nd DistrictMax S. Franklin
3rd DistrictLouis P. Hetlage
4th DistrictJames C. Cope
5th District
Vice-ChairmanWilliam D. Bradshaw
6th DistrictR. Allen Chandler
7th DistrictHoward J. McAlhany
8th DistrictE. A. Stricker
9th District
ChairmanEugene T. Hansbrough
10th District

MSMA Committees and Commissions

1971-1972

STANDING COMMITTEES

Executive Committee—Gerald L. Miller, Kansas City, Chairman; Walter T. Gunn, St. Louis; John I. Matthews, Jefferson City; Charles R. Gulick, St. Louis; E. A. Stricker, St. James; James C. Cope, Columbia (1972).

Constitution and By-Laws—Kenneth C. Hollweg, Kansas City, Chairman (1973); Miles C. Whitener, St. Louis County (1974); Paul F. Max, St. Louis (1973); Donald M. Dowell, Chillicothe (1972); Kenneth E. Knabb, Springfield (1972).

Publication—Joseph V. Finnegan, St. Louis, Chairman; William C. Mixson, Kansas City; Charles S. Sherwin, St. Louis; Byron M. Stuart, Boonville; Wilfred Woodriddle, Springfield (1972).

Legislative Affairs—John I. Matthews, Jefferson City, Chairman; Gerald L. Miller, Kansas City; Joseph L. Fisher, St. Joseph; Walter T. Gunn, St. Louis; Robert E. Bregant, Jefferson City (1972).

Planning—David N. Kerr, St. Louis, Chairman (1975); Oral B. Crawford, Springfield (1976); James A. Hasek, Mountain Grove (1976); Hector W. Benoit, Jr., Kansas City (1975); Charles P. McGinty, Cape Girardeau (1974); James C. Cope, Columbia (1974); Albert Cross, Trenton (1973); C. Read Boles, St. Louis (1973); William D. Bradshaw, Clinton (1972); J. Will Fleming, Moberly (1972).

Voluntary Health Agencies—Wendell G. Scott, St. Louis, Chairman (1973); William C. Allen, Columbia (1974); Charles E. Lockhart, Springfield (1973); John McDonough, St. Louis (1972); Max E. Teare, Kansas City (1972).

STANDING COMMISSIONS

Public Affairs—Richard Bowles, Liberty, Chairman (1973); Joseph Kendis, St. Louis (1974); W. W. Tillman, Jr., Springfield (1974); John L. Barnard, Jr., Kansas City (1974); Allen Klippel, St. Louis (1974); Joseph A. Zimmerman, Kennett (1974); H. V. Guhleman, Jr., Jefferson City (1973); Hubert Ritter, St. Louis (1973); A. W. Neilson, St. Louis (1973); Richard Sutter, St. Louis (1973); Troy Morgan, Albany (1972); John T. Crowe, Cape Girardeau (1972); Thomas J. Fischer, Hannibal (1972); John L. Mothershead, St. Joseph (1972); C. Keith Whittaker, Kansas City (1972).

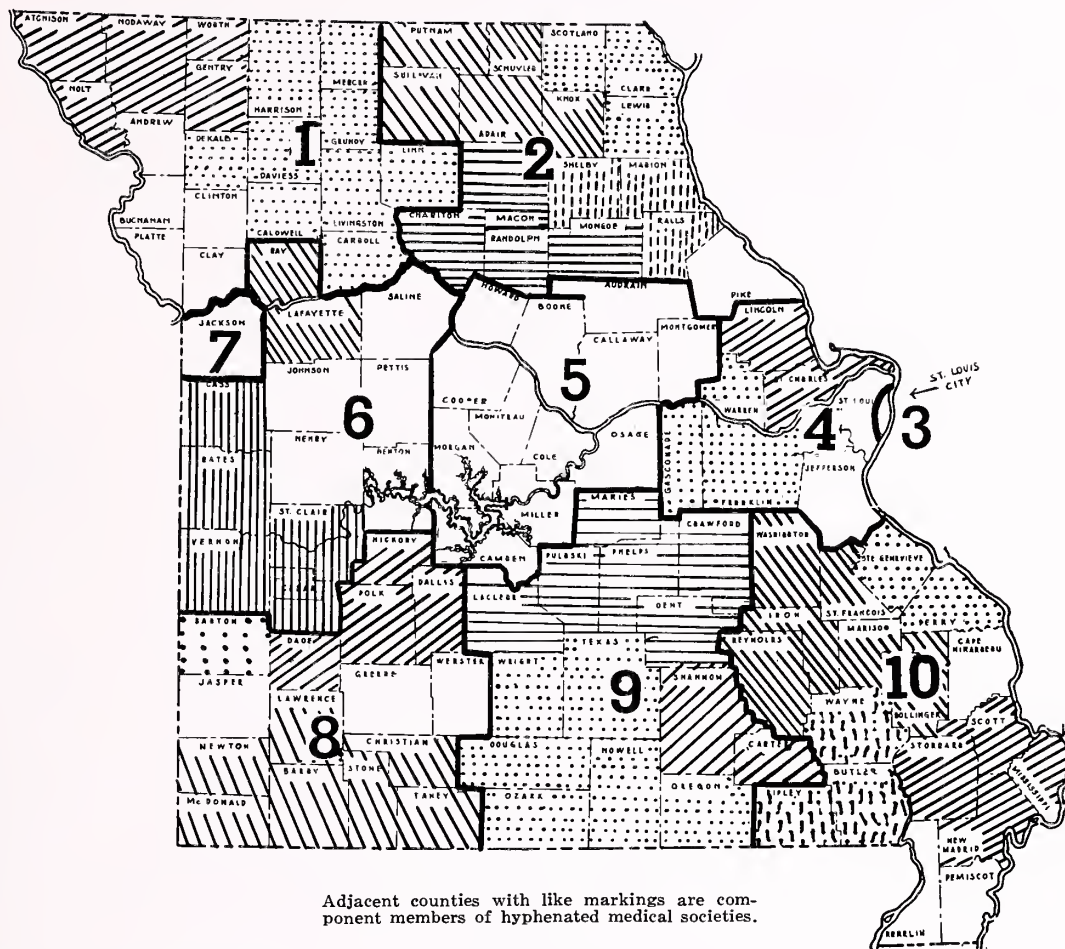
Medical Economics, Third Party Medicine and Governmental Relations—Herbert C. Wiegand, St. Louis, Chairman (1973); Rolla B. Wray, Nevada (1974); Charles W. Chastain, Farmington (1974); Robert H. Lund, St. Louis (1974); Blaine Z. Hibbard, Kansas City (1974); Erroll W. Allen, Carrollton (1974); W. J. Ferguson, Sikeston (1973); Kenneth K. Keown, Columbia (1973); Rae W. Froelich, Lebanon (1973); Louis P. Hetlage, Troy (1973); Francis M. Maple, Springfield (1972); Stanley S. Peterson, Springfield (1972); Victor B. Buhler, Kansas City (1972); Mark D. Eagleton, St. Louis (1972); E. E. Wadlow, St. Joseph (1972).

Continuing Education and Health Manpower—John F. McDonnell, Kansas City, Chairman (1973); Richard A. Fraser, Bonne Terre (1974); R. E. Catanzaro, St. Louis (1974); W. Thomas Morgan, Jr., West Plains (1974); Charles Spears, Branson (1974); W. Wayne Boydston, Odessa (1974); A. Sherwood Baker, Columbia (1973); Edward D. Kinsella, St. Louis (1973); Paul O. Hagemann, St. Louis (1973); Charles A. Worley, Sweet Springs (1973); Edwin M. Powell, Springfield (1972); H. Peter Ekern, Mexico (1972); B. J. Bass, Salem (1972); George H. Ladyman, Poplar Bluff (1972); Paul R. Young, Kansas City (1972).

Medical-Legal Affairs—Daniel L. Yancey, Springfield, Chairman (1973); Joseph S. Cope, Lexington (1974); Jerome I. Simon, Clayton (1974); Irving H. Clark, Kansas City (1974); Jack R. Eidelman, St. Louis (1974); George P. Wilson, Columbia (1974); Robert E. Funsch, St. Louis (1973); Frederick J. McCoy, Kansas City (1973); Ned B. Chase, Jr., Joplin (1973); Jack S. Sanders, Jefferson City (1973); Lee T. Ford, Jr., St. Louis (1972); Jack L. Vinyard, Carrollton (1972); Wilbur P. McDonald, St. Joseph (1972); Harold B. Rapp, Cape Girardeau (1972); William R. McPhee, Kansas City (1972).

Interspecialty Medicine—Cyril J. Costello, St. Louis, Missouri State Surgical Society, Chairman; James W. Willoughby, Kansas City, Missouri State Allergy Association; G. W. N. Eggers, Jr., Columbia, Missouri Society of Anesthesiologists; Robert M. Hazen, Kansas City, Otolaryngology; R. Stacy Long, Kansas City, Missouri Academy of General Practice; Robert S. Mosser, Kansas City, Missouri Society of Internal Medicine; Herbert E. Rosenbaum, St. Louis, St. Louis Society of Neurological Sciences; Trevor F. Watson, Columbia, Missouri Obstetrical and Gynecological Society; Truman B. Schertz, North Kansas City, Missouri Ophthalmological Society; Richard E. Lord, St. Louis, Missouri State Orthopedic Association; Richard D. Blim, Kansas City, Missouri Chapter, American Academy of Pediatrics; Edmund V. Cowdry, Jr., St. Louis, Missouri Academy of Psychiatry; Edwin D. Wolfgram, St. Louis, Missouri Psychiatric Association; Joseph C. Peden, Jr., St. Louis, Missouri Chapter, American College of Surgeons; C. Laurence Johnson, Kansas City, Federation of Missouri Urologists; George L. Hawkins, St. Louis, Missouri Association of Neurological Surgeons; Joseph B. Grindon, St. Louis, Missouri Dermatological Society, Inc.; William Stoneman, III, St. Louis, Society of Missouri Plastic Surgeons; Omer E. Hagebusch, St. Louis, Missouri Pathology Society; Mark D. Eagleton, Clayton, Missouri Radiological Society; Thomas B. Ferguson, St. Louis, Missouri, Society of Thoracic and Cardiovascular Surgeons; Lester E. Wolcott, Columbia, Physiatry.

Councilor Districts and Counties in Each District



Adjacent counties with like markings are component members of hyphenated medical societies.

DISTRICT	COUNCILOR	COUNTIES
First	John N. Martin, M.D. St. Joseph	Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Linn, Livingston, Mercer, Nodaway, Platte and Worth
Second	Lysle M. Bach, M.D. Hannibal	Adair, Chariton, Clark, Knox, Lewis, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby and Sullivan
Third	Max S. Franklin, M.D. St. Louis	St. Louis (City)
Fourth	Louis P. Hetlage, M.D. Troy	Franklin, Gasconade, Jefferson, Lincoln, St. Charles, St. Louis (County) and Warren.
Fifth	James C. Cope, M.D. (Vice-Chairman) Columbia	Audrain, Boone, Callaway, Camden,* Cole, Cooper, Howard, Miller, Moniteau, Montgomery, Morgan and Osage*
Sixth	William D. Bradshaw, M.D. Clinton	Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, Ray, St. Clair, Saline and Vernon
Seventh	R. Allen Chandler, M.D. Kansas City	Jackson
Eighth	Howard J. McAlhany, M.D. Springfield	Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney and Webster
Ninth	E. A. Stricker, M.D. (Chairman) St. James	Carter, Crawford, Dent, Douglas, Howell, Laclede, Maries, Oregon, Ozark, Phelps, Pulaski, Shannon, Texas and Wright
Tenth	Eugene T. Hansbrough, M.D. Poplar Bluff	Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscot, Perry, Reynolds, Ripley, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington and Wayne

* Counties with no medical organization.

Component Societies in Affiliation With the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew	1	Gilbert B. Kelley	Savannah	Warren C. Baker	Savannah
Audrain	5	William H. Jolly	Mexico	Thomas L. Dwyer	Mexico
Barton	8	Thomas W. Carroll	Lamar	Vern T. Bickel	Lamar
Boone	5	Roger W. Bumgarner	Columbia	William R. Bynum	Columbia
Buchanan	1	Sharon E. Waggoner	St. Joseph	Randall W. Weed	St. Joseph
Butler-Wayne-Ripley	10	George H. Ladyman	Poplar Bluff	Joseph E. Hecker	Poplar Bluff
Callaway	5	William J. Cremer	Fulton	James K. Ritterbusch	Fulton
Cape Girardeau	10	Earl W. Johnson	Cape Girardeau	Jerry L. Kinder	Cape Girardeau
Carter-Shannon	9			Harry D. Rollins	Winona
Chariton-Macon-Monroe-Randolph	2	J. Will Fleming, Jr.	Moberly	W. D. Chute	Moberly
Clay	1	Donald E. Kuenzi	Kansas City	Felix A. Pileggi	N. Kansas City
Clinton	1	Wilber B. Spalding	Plattsburg	James H. Sweiger	Plattsburg
Cole	5	Thomas J. Ryan	Jefferson City	Charles W. Cooper	Jefferson City
Cooper	5	W. B. Avery	Boonville	E. T. Humphreys	Boonville
Dallas-Hickory-Polk-Dade	8	Evelyn Griffin	Buffalo	Monte Kahler	Bolivar
Dunklin	10	Norman A. Garrison, Jr.	Kennett	Quinton Tarver	Kennett
Franklin-Gasconade-Warren	4	Donald L. Baker	Union	Thomas J. Mitchell	St. Clair
Grand River (Caldwell-Carroll-Livingston-Grundy-Daviess-Harrison-Linn-Mercer-DeKalb)	1	Albert D. Cross	Trenton	Frank R. Daley	Hamilton
Greene	8	Oral B. Crawford	Springfield	Floyd R. Barnhill	Springfield
Henry	6	W. D. Bradshaw	Clinton	R. S. Hollingsworth	Clinton
Howard	5	Wm. J. Shaw, Jr.	Fayette	F. D. Dean	Fayette
Jackson	7	Sidney Rubin	Kansas City	James S. White	Kansas City
Jasper	8	Ned B. Chase, Jr.	Joplin	Robert B. Adams	Joplin
Jefferson	4	Roger H. Allbee	Crystal City	Richard C. Carroll	Crystal City
Johnson	6	T. Reed Maxson	Warrensburg	Robert L. Cooper	Warrensburg
Lafayette-Ray	6	Herbert K. Huber	Richmond	W. Wayne Boydston	Odessa
Levis-Clark-Scotland	2	Earl E. Gilfillan	Memphis	Landis Y. Davis	Canton
Marion-Ralls-Shelby	2	Phillip B. Foreman	Hannibal	Walter N. A. Latimer	Hannibal
Mid-Missouri (Phelps-Crawford-Dent-Pulaski-Maries-Laclede)	9	Martin M. Hart	Salem	Ted P. Smith	Rolla
Miller	5	Edward O. Shelton	Eldon	Carl T. Buehler, Jr.	Eldon
Mineral Area (St. Francois-Iron-Madison-Washington-Reynolds-Bollinger)	10	Edward E. Mardini	Bonne Terre	C. W. Chastain	Farmington
Moniteau	5	K. S. Latham	California	L. M. Gallagher	California
Montgomery	5			S. J. Byland	Wellsville
Morgan	5	Ruth Kauffman	Versailles	Robert Hall	Versailles
North Central Counties (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Francis Tarvydas	Edina	Milton T. English	Kirksville
Northwest Missouri Medical Society (Nodaway-Holt-Atchison-Gentry-Worth)	1	John N. Wanamaker	Rock Port	Frank Matteson	Grant City
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald)	8	Paul B. Anderson	Neosho	Robert M. Brown	Neosho
Pemiscot	10	Gordon L. Duckworth, Jr.	Hayti	C. W. McKaskle	Caruthersville
Perry-St. Genevieve	10	Lawrence W. Feltz	Perryville	J. F. Lutkewitte	Ste. Genevieve
Pettis	6	Robert L. Glass	Sedalia	Jerome E. Block	Sedalia
Pike	2	Lawrence G. Stuerman	Louisiana	Edward K. Jackson	Clarksville
Platte	1	Paul C. Vescovo	Kansas City	Charles H. Sincos	Platte City
St. Charles-Lincoln	4	Roman E. Hammes	St. Charles	John C. Soucy	St. Charles
St. Louis City	3	Lawrence W. O'Neal	St. Louis	Paul L. Friedman	St. Louis
St. Louis County	4	Falls B. Hershey	St. Louis	Klark Exarhou	St. Louis
Saline	6	M. E. Rochrs	Marshall	C. A. McBurney	Slater
SEMO County Medical Society (Stoddard-New Madrid-Mississippi-Scott)	10	Frank Tull	Sikeston	Thelma C. Buckthorpe	Sikeston
South Central (Howell-Oregon-Texas-Wright-Douglas-Ozark)	9	Rollin H. Smith	West Plains	Jack N. Wiles	West Plains
Webster	8	T. M. Macdonnell	Marshfield	Robert J. Bareis	Marshfield
West Central Missouri Medical Society (Bates-Cass-Cedar-St. Clair-Vernon)	6	Robert L. Magee	El Dorado Springs	John Torontow	Nevada

Guide to County Medical Societies

Following is a list of Missouri communities in which MSMA member-physicians are in active practice or reside. Name of the community is followed by the county in which it is located and the medical society to which physicians of that community normally would belong.

<i>Town</i>	<i>County</i>	<i>Medical Society</i>	<i>Town</i>	<i>County</i>	<i>Medical Society</i>
A			F		
Afton	St. Louis*		Farmington	St. Francois	Mineral Area
Albany	Gentry	Northwest Missouri	Fayette	Howard	Howard
Altenberg	Perry	Perry-St. Genevieve	Fenton	St. Louis*	
Appleton City	St. Clair	West Central	Ferguson	St. Louis*	
Arnold	Jefferson	Jefferson	Festus	Jefferson	Jefferson
Aurora	Lawrence	Ozarks	Flat River	St. Francois	Mineral Area
Ava	Douglas	South Central	Florissant	St. Louis*	
B			Forsyth	Taney	Ozarks
Ballwin	St. Louis*		Fort Leonard Wood	Pulaski	Mid-Missouri
Belton	Cass	West Central	Fredericktown	Madison	Mineral Area
Berkeley	St. Louis*		Frontenac	St. Louis*	
Bethany	Harrison	Grand River	Fulton	Callaway	Callaway
Bloomfield	Stoddard	SEMO	G		
Blue Springs	Jackson	Jackson	Gallatin	Daviess	Grand River
Bolivar	Polk	Dallas-Hickory-Polk-Dade	Gashland	Clay	Clay
Bonne Terre	St. Francois	Mineral Area	Gerald	Franklin	Franklin-Gasconade-Warren
Boonville	Cooper	Cooper	Gideon	New Madrid	SEMO
Bourbon	Crawford	Mid-Missouri	Gladden	St. Louis*	
Bowling Green	Pike	Pike	Glasgow	Howard	Howard
Branson	Taney	Ozarks	Glendale	St. Louis*	
Braymer	Caldwell	Grand River	Grandview	Jackson	Jackson
Brentwood	St. Louis*		Grant City	Worth	Northwest Missouri
Bridgeton	St. Louis*		Gravois Mills	Morgan	Morgan
Brookfield	Linn	Grand River	Greenfield	Dade	Barton-Dade
Browning	Linn	Grand River	H		
Brunswick	Chariton	Chariton-Macon-Monroe-Randolph	Hamilton	Caldwell	Grand River
Buckner	Jackson	Jackson	Hannibal	Marion	Marion-Ralls-Shelby
Bufalo	Dallas	Dallas-Hickory-Polk-Dade	Harrisonville	Cass	West Central
Butler	Bates	West Central	Hayti	Pemiscot	Pemiscot
C			Herculaneum	Jefferson	Jefferson
Cabool	Texas	South Central	Hermann	Gasconade	Franklin-Gasconade-Warren
Cainesville	Harrison	Grand River	Hickman Mills	Jackson	Jackson
California	Moniteau	Moniteau	Higginsville	Lafayette	Lafayette-Ray
Camdenton	Camden	Camden	Hillsboro	Jefferson	Jefferson
Cameron	Clinton	Clinton	Hornersville	Dunklin	Dunklin
Cape Girardeau	Cape Girardeau	Cape Girardeau	Houston	Texas	South Central
Cardwell	Dunklin	Dunklin	Humansville	Polk	Dallas-Hickory-Polk-Dade
Carrollton	Carroll	Grand River	Huntsville	Randolph	Chariton-Macon-Monroe-Randolph
Carthage	Jasper	Jasper	I		
Caruthersville	Pemiscot	Pemiscot	Illmo	Cape Girardeau	Cape Girardeau
Cassville	Barry	Ozarks	Independence	Jackson	Jackson
Centralia	Boone	Boone	Ironton	Iron	Mineral Area
Charleston	Mississippi	SEMO	J		
Chesterfield	St. Louis*		Jackson	Cape Girardeau	Cape Girardeau
Chillicothe	Livingston	Grand River	Jefferson Barracks	St. Louis*	
Clarksville	Pike	Pike	Jefferson City	Cole	Cole
Clayton	St. Louis*		Jennings	St. Louis*	
Clinton	Henry	Henry	Joplin	Jasper	Jasper
Columbia	Boone	Boone	K		
Concordia	Lafayette	Lafayette-Ray	Kansas City	Jackson	Jackson
Crane	Stone	Ozarks	Kennett	Dunklin	Dunklin
Creve Coeur	St. Louis*		King City	Gentry	Northwest Missouri
Crystal City	Jefferson	Jefferson	Kirkville	Adair	North Central
Cuba	Crawford	Mid-Missouri	Kirkwood	St. Louis*	
D			Knobnoster	Johnson	Johnson
Desloge	St. Francois	Mineral Area	Knox City	Knox	North Central
DeSoto	Jefferson	Jefferson	Koch	St. Louis*	
Dexter	Stoddard	SEMO	L		
Doniphan	Ripley	Butler-Wayne-Ripley	Ladue	St. Louis*	
E			Lamar	Barton	Barton
East Prairie	Mississippi	SEMO	Lawson	Ray	Lafayette-Ray
Edina	Knox	North Central	Leadwood	St. Francois	Mineral Area
Eldon	Miller	Miller			
El Dorado Springs	Cedar	West Central			
Elsberry	Lincoln	St. Charles-Lincoln			
Everton	Jackson	Jackson			
Excelsior Springs	Clay	Clay			

* Member may belong to St. Louis County Medical Society or St. Louis Medical Society.

County	Town	Medical Society
Lebanon	Laclede	Mid-Missouri
Lee's Summit	Jackson	Jackson
Lemay	St. Louis*	
Lexington	Lafayette	Lafayette-Ray
Liberty	Clay	Clay
Lockwood	Dade	Dallas-Hickory-Polk-Dade
Louisiana	Pike	Pike

M

Macon	Macon	Chariton-Macon-Monroe-Randolph
Malden	Dunklin	Dunklin
Maplewood	St. Louis*	
Marceline	Linn	Grand River
Marshall	Saline	Saline
Marshfield	Webster	Webster
Martin City	Jackson	Jackson
Maryville	Nodaway	Northwest Missouri
Memphis	Scotland	Lewis-Clark-Scotland
Mexico	Audrain	Audrain
Milan	Sullivan	North Central
Moberly	Randolph	Chariton-Macon-Monroe-Randolph
Monett	Barry	Ozarks
Montgomery City	Montgomery	Montgomery
Morehouse	New Madrid	SEMO
Mound City	Holt	Northwest Missouri
Mountain Grove	Wright	South Central
Mountain View	Howell	South Central
Mount Vernon	Lawrence	Ozarks

N

Neosho	Newton	Ozarks
Nevada	Vernon	West Central
New Florence	Montgomery	Montgomery
New Haven	Franklin	Franklin-Gasconade-Warren
New Madrid	New Madrid	SEMO
Normandy	St. Louis*	
North Kansas City	Clay	Clay

O

Oak Grove	Jackson	Jackson
Odessa	Lafayette	Lafayette-Ray
O'Fallon	St. Charles	St. Charles-Lincoln
Olivette	St. Louis*	
Osceola	St. Clair	West Central
Overland	St. Louis*	
Owensville	Gasconade	Franklin-Gasconade-Warren
Ozark	Christian	Ozarks

P

Pacific	Franklin	Franklin-Gasconade-Warren
Palmyra	Marion	Marion-Ralls-Shelby
Paris	Monroe	Chariton-Macon-Monroe-Randolph
Parkville	Platte	Platte
Parma	New Madrid	SEMO
Pattonsburg	Daviess	Grand River
Pattonville	St. Louis*	
Perryville	Perry	Perry-Ste. Genevieve
Piedmont	Wayne	Butler-Wayne-Ripley
Pine Lawn	St. Louis*	
Platte City	Platte	Platte
Plattsburg	Clinton	Clinton
Pleasant Hill	Cass	West Central
Poplar Bluff	Butler	Butler-Wayne-Ripley
Portageville	New Madrid	SEMO
Potosi	Washington	Mineral Area
Princeton	Mercer	Grand River

R

Raytown	Jackson	Jackson
Reeds Spring	Stone	Ozarks

Town	County	Medical Society
Republic	Greene	Greene
Rich Hill	Bates	West Central
Richmond	Ray	Lafayette-Ray
Richmond Heights	St. Louis*	
Robertson	St. Louis*	
Rock Hill	St. Louis*	
Rockport	Atchison	Northwest Missouri
Rolla	Phelps	Mid-Missouri

S

St. Ann	St. Louis*	
St. Charles	St. Charles	St. Charles-Lincoln
St. Clair	Franklin	Franklin-Gasconade-Warren
Ste. Genevieve	Ste. Genevieve	Perry-Ste. Genevieve
St. James	Phelps	Mid-Missouri
St. Joseph	Buchanan	Buchanan
St. Louis City *		
Salem	Dent	Mid-Missouri
Salisbury	Chariton	Chariton-Marion-Monroe-Randolph
Sappington	St. Louis*	
Sarcoie	Jasper	Jasper
Savannah	Andrew	Andrew
Sedalia	Pettis	Pettis
Shelbina	Shelby	Marion-Ralls-Shelby
Shelbyville	Shelby	Marion-Ralls-Shelby
Shrewbury	St. Louis*	
Sikeston	Scott	SEMO
Slater	Saline	Saline
Smithton	Pettis	Pettis
Smithville	Clay	Clay
Springfield	Greene	Greene
Stanberry	Gentry	Northwest Missouri
Steele	Pemiscot	Pemiscot
Steelville	Crawford	Mid-Missouri
Stockton	Cedar	West Central
Stratford	Greene	Greene
Sullivan	Franklin	Franklin-Gasconade-Warren
Sweet Springs	Saline	Saline

T

Tarkio	Atchison	Northwest Missouri
Thayer	Oregon	South Central
Trenton	Grundy	Grand River
Troy	Lincoln	St. Charles-Lincoln

U

Union	Franklin	Franklin-Gasconade-Warren
University City	St. Louis*	

V

Valley Park	St. Louis*	
Vandalia	Audrain	Audrain
Versailles	Morgan	Morgan

W

Warrenton	Johnson	Johnson
Warrensburg	Warren	Franklin-Gasconade-Warren
Warsaw	Benton	Benton
Washington	Franklin	Franklin-Gasconade-Warren
Waverly	Lafayette	Lafayette-Ray
Waynesville	Pulaski	Mid-Missouri
Webb City	Jasper	Jasper
Webster Groves	St. Louis*	
Wellsville	Montgomery	Montgomery
Wentzville	St. Charles	St. Charles-Lincoln
West Plains	Howell	South Central
Willard	Greene	Greene
Willow Springs	Howell	South Central
Windsor	Henry	Henry
Winona	Shannon	Carter-Shannon
Winston	Daviess	Grand River

* Member may belong to St. Louis County Medical Society or St. Louis Medical Society.

Alphabetical Roster of Members

(See Instructions on Page 519)

A

Aaron, George A., Independence
 Abel, Charles C., St. Louis
 Abel, Oliver, III, St. Louis
 Abelardo, Miguel L., St. Louis
 Abele, William A., Boonville
 Abell, Walter E., St. Louis
 Abella, Bienvenido Z., Kansas City
 Abrams, Bernard M., Kansas City
 Abrams, Morris, St. Louis
 Acker, Harry L., St. Louis
 Ackerman, Lauren V., St. Louis
 Ackerman, Norman B., Kansas City
 Acuff, R. Phillip, St. Joseph
 Adams, Harold D., Columbia
 Adams, Howard D., Liberty
 Adams, Robert B., Jr., Joplin
 Adelman, Arthur, Kansas City
 Adler, Benard C., St. Louis
 Adler, Federico, Kansas City
 Agasino, Gaudencio, St. Louis
 Agee, Loren G., Kansas City
 Agress, Harry, St. Louis
 Aguinaldo, Jaime A., St. Louis
 Ahadi, Abd Ul Ahad, St. Louis
 Ahern, Archibald M., St. Louis
 Ahlering, George H., Clayton
 Ahlvin, Robert C., Sikeston
 Ahmad, Bashir, St. Louis
 Aiken, George A., Marshall
 Aitken, Louis F., St. Louis
 Aks, Daniel, Kansas City
 Akyol, Salim, St. Louis
 Alhera, Victor H., St. Louis
 Alberg, Marvin R., Kansas City
 Alderman, Thomas F., Kansas City
 Alegre, Jorge M., St. Louis
 Alex, Morris, St. Louis
 Alexander, Frazier D., St. Louis
 Allain, James J., North Kansas City
 Allan, James E., Jefferson City
 Allan, James R., Joplin
 Allbee, Roger H., Crystal City
 Allebach, Hobart K., Kansas City
 Allen, Claude J., Rich Hill
 Allen, David O., Joplin
 Allen, Erroll W., Carrollton
 Allen, Henry C., Clayton
 Allen, Hollis N., St. Louis
 Allen, James H., St. Louis
 Allen, Jerry H., Springfield
 Allen, Joseph E., Columbia
 Allen, Louis A., N. Kansas City
 Allen, Melvin A., St. Louis
 Allen, Robert E., Kansas City
 Allen, Robert W., Columbia
 Allen, S. Lloyd, Kansas City
 Allen, Willard M., St. Louis
 Allen, William B., Kansas City
 Allen, William C., Columbia
 Allen, William E., Jr., St. Louis
 Allen, William H., Nevada
 Allison, James B., Springfield
 Allison, Richard F., Mt. Vernon
 Almiron, Osias A., St. Louis
 Almond, Carl H., Columbia
 Alonso, Jose Mario V., Jr., St. Louis
 Alonso-Yague, P., St. Louis
 Alsop, Webb S., Jr., Shawnee Mission, Kan.
 (Member Jackson County Medical Society)
 Althaus, Carl Jacob, St. Louis
 Altheide, Harvey E., Ladue
 Altheide, J. Paul, St. Louis
 Altomare, Edward P., Kansas City
 Altringer, Arthur N., Shawnee Mission, Kan.
 (Member Jackson County Medical Society)
 Alvarez, Luis L., St. Louis
 Alvarez, Ulises C., St. Louis
 Alvis, Bennett Y., St. Louis
 Alvis, Edmund B., St. Louis
 Aleya, J. O., Cape Girardeau
 Alzola, Jose M., St. Louis
 Amado-Ledo, David E., St. Louis
 Ames, Mary B., St. Joseph
 Ames, William H., St. Joseph
 Amin, Navinkumar J., St. Louis
 Amjad, Mohammad T., St. Louis
 Amlinger, Phillip R., Columbia
 Ammatelli, Francis J., Kansas City
 Amoury, Raymond A., Kansas City
 Andersen, Elmer J. T., Montgomery City
 Anderson, Charles B., St. Louis
 Anderson, Ivan A., Columbia

Anderson, John M., St. Louis
 Anderson, Paul B., Neosho
 Anderson, Philip C., Columbia
 Anderson, Raymond B., Kansas City
 Anderson, Richard W., Kansas City
 Anderson, Thomas R., Columbia
 Andreassen, Dimil F., Rolla
 Andrews, Berneil W., Kansas City
 Andrus, Bailey C., Kansas City
 Angles, Luis E., Kansas City
 Anglo, Luis B., St. Louis
 Anstey, George, St. Louis
 Anthony, Dallas, Springfield
 Anthony, Elwyn J., St. Louis
 Appleberry, Charles H., Rivermines
 Aquino, Philip J., Caruthersville
 Arat, Metin, Farmington
 Arbab, Ali A., Kansas City
 Archer, Perry C., Shelbyville
 Arguelles, Calixto Ramon, Farmington
 Arms, Arnold V., Kansas City
 Armstrong, Jay H., Shawnee Mission, Kan.
 (Member Clay County Medical Society)
 Arneson, Axel N., St. Louis
 Arney, William G., St. Louis
 Arnold, Eugene L., Jennings
 Arnold, Herbert M., Lamar
 Arnold, John D., Kansas City
 Arnold, Richard C., Columbia
 Aronberg, Lawrence M., St. Louis
 Aronson, Abraham, St. Louis
 Arnot, John P., St. Louis
 Arst, Herbert E., Kansas City
 (Member Clay County Medical Society)
 Aschman, Theodore H., Kansas City
 Asel, Norman D., Columbia
 Ash, Charles J., Springfield
 Asher, A. Graham, Kansas City
 Ashley, Hugh V., Cape Girardeau
 Ashley, Hugh, Jr., Cape Girardeau
 Ashley, Thomas F., Springfield
 Atcheson, Bellefield, Kansas City
 Atcheson, Windsor B., Trenton
 Atkins, Eliska F., St. Louis
 Atkinson, Thomas E., Jr., Springfield
 Atwell, Floyd C., Kansas City
 Auer, Arthur I., St. Louis
 Auer, Edward T., St. Louis
 Aufderheide, G. Russell, St. Louis
 Auguste, Jean Meledain, St. Louis
 Augustin, Cesar, St. Louis
 Augustine, Robert W., St. Joseph
 Aulenbacher, Carl E., Washington
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 Auner, Cecil R., Springfield
 Averill, Keith H., Kansas City
 Avery, Willard B., Boonville
 Aviole, Louis V., St. Louis
 Ayata, Sedat M., St. Louis
 Aylward, Howard J., St. Louis
 Ayzazian, Vatche H., St. Louis
 Azuma, Nobutaka, St. Louis
 Azzouni, J. N., Fenton

B

Babka, Joseph J., St. Louis
 Bach, Lysle M., Hannibal
 Back, Donald K., Springfield
 Backer, Matthias H., Jr., St. Louis
 Badger, Virginia M., St. Louis
 Baer, Alvin J., Kansas City
 Bagby, James W., Clayton
 Bahn, Charles F., Cape Girardeau
 Bai, Sangzin, St. Louis
 Bailey, Alan H., Springfield
 Bailey, Drennan, St. Louis
 Bailey, William H., St. Louis
 Baird, Keim L., St. Louis
 Baker, A. Sherwood, Columbia
 Baker, Donald L., Union
 Baker, James M., Columbia
 Baker, Josephine D., Moberly
 Baker, Philip J., Kansas City
 Baker, Warren C., Savannah
 Balazs, Karl J., Port Charlotte, Fla.
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 Baldwin, Theodore R., Excelsior Springs
 Bales, Eugene L., Carrollton
 Balhuizen, John, Kansas City
 Ball, David A., Kansas City
 Ballard, V. Bryce, Kansas City
 Ballinger, Walter F., II, St. Louis
 Balster, Vernon H., St. Louis
 Bandle, Donald F., St. Louis
 Banet, Samuel R., St. Louis
 Banks, Frank R., Smithville
 Bankuti, Ferenc, Kansas City
 Banton, M. Roman, St. Louis
 Banton, Thomas J., St. Louis
 Banton, William C., St. Louis
 Barbour, Marvin R., Poplar Bluff
 Barden, Frank W., Creve Coeur
 Bare, Chester I., Jr., Kansas City
 Bare, Edward F., Tarkio
 Bareis, Robert J., Marshfield
 Barelli, Pat A., Kansas City
 Barker, Edward T., St. Louis
 Barloon, James H., Kansas City
 Barnard, John L., Jr., Kansas City
 Barner, Hendrick, St. Louis
 Barnes, Seth S., Cape Girardeau
 Barnett, Charles H., Bolivar
 Barnett, Floyd A., Paris
 Barnett, Gordon P., Shawnee Mission, Kan.
 (Member Jackson County Medical Society)
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 Barnhill, Floyd R., Springfield
 Barone, Paul L., Nevada
 Barr, Glenn A., Kansas City
 Barragan, Hector, Ballwin
 Barrett, Scott R., St. Louis
 Barrios, Francisco, St. Louis
 Barrow, Jack, St. Louis
 Barry, Gerald W., Kansas City
 Barry, William B., Kansas City
 Bartlett, Robert W., St. Louis
 Bartlett, Willard, Jr., St. Louis
 Bartnick, Mitchell L., St. Louis
 Bartulica, Nicholas, St. Joseph
 Basantz, Fernando V., Kansas City
 Baska, R. E., Kansas City
 Bass, Billy J., Salem
 Bass, Walter R., Kansas City
 Bates, George C., Kansas City
 Battersby, Richard S., Columbia
 Baue, Arthur E., St. Louis
 Bauer, Harold A., Lockwood
 Bauer, John D., St. Louis
 Bauer, Joseph A., St. Louis
 Bauer, Lefe W., Kansas City
 Bauer, Maria, Granite City, Ill.
 (Member St. Louis Medical Society)
 Bauer, Otto, Granite City, Ill.
 (Member St. Louis Medical Society)
 Bauer, Robert A., St. Louis
 Baula, Armindo G., St. Louis
 Baum, Frank E., Kansas City
 Bauman, Henry C., Maryville
 Baumann, A. R., Steelville
 Baumann, William B., Pontiac, Mich.
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 Bawell, Malcolm B., St. Louis
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 Bazzoui, Widad, Columbia
 Bealer, Louis A., Lebanon
 Beard, R. Wheatley, Springfield
 Beard, William J., Kansas City
 Beare, J. Byron, St. Louis
 Beasley, L. Kenneth, St. Louis
 Beato, David L., St. Louis
 Beatty, Arch J., Kansas City
 Beatty, Eugene C., Kansas City
 Beatty, Nina D., Kansas City
 Beaty, William R., St. Ann
 Bechtold, F. F., Poplar Bluff
 Beck, Calvin E., Kansas City
 Beck, Paul M., St. Joseph
 Becker, Bernard, St. Louis
 Becker, Edward J., St. Louis
 Becker, George H., St. Louis
 Becker, Richard R., Kansas City
 Becker, Rolfe A., Kansas City
 Becker, Stanley C., St. Louis
 Beckett, Theodore C., Boonville
 Beckett, Edmund S., St. Louis
 Beckloff, Gerald L., Kansas City
 Beckman, Donald E., St. Louis
 Beecher, Sheldon B., Poplar Bluff
 Beene, Thomas K., Columbia
 Beheler, Edward M., St. Joseph
 Behrens, Donald T., St. Louis
 Behrens, Gerald L., St. Louis
 Beidle, Raymond J., St. Ann
 Beis, Louis D., St. Charles
 Belancourt, Dunet F., St. Louis
 Belden, Edgar A., Jefferson City
 Belwe, Joe E., St. Louis
 Bell, Robert M., St. Louis

Bell, William F., Lee's Summit
Benage, Clarence M., Florissant
Benjamin, Durand, St. Louis
Bennett, James D., Kansas City
Benoit, Hector Wright, Jr., Kansas City
Benson, John F., St. Louis
Benson, Leo J., Jr., Kennett
Benson, Scott C., St. Joseph
Benson, William F., Kansas City
Bentlage, Charles H., Joplin
Bentley, John D., Springfield
Benton, Calvin B., St. Louis
Berard, Louis N., St. Louis
Berenson, Sheldon E., Kansas City
Berg, Edward F., St. Louis
Berg, Leonard, St. Louis
Berg, Ralph, St. Louis
Berger, Edward J., St. Louis
Berger, Robert M., St. Louis
Bergman, Hugo F., St. Louis
Bergmann, Dwayne, St. Louis
Bergmann, John F., St. Louis
Bergmann, Martin, St. Louis
Bergmann, Victor H., Kansas City
Bergner, Grace E., St. Louis
Berland, Harry I., St. Louis
Berlin, Roger, Kansas City
Bernan, William, St. Louis
Bernabe, Florino H., St. Louis
Bernabe, Ofelia M., St. Louis
Bernard, J. W., Caruthersville
Bernsen, Gerard H., Rock Hill
Berney, Francis J., St. Joseph
Berni, Anthony A., St. Louis
Bernreiter, Michael, Kansas City
Bernstein, Aaron M., Clayton
Berry, G. Neill, Kansas City
Berry, John W., St. Louis
Berry, Maxwell G., Kansas City
Berry, Paul T., Springfield
Bersche, Bertram L., St. Louis
Berwald, Irwin I., St. Louis
Bess, William E., Sedalia
Best, Robert, Overland Park, Kan.
(Member Lafayette-Ray County Medical Society)
Betttonville, Paul J., Jr., St. Louis
Betz, Richard J., Neosho
Bickel, Vern T., Lamar
Bickley, James E., Kansas City
Biddy, Ralph L., St. Louis
Bidwell, Robert E. G., Kansas City
Bigger, John F., Jr., St. Louis
Biggs, Alfred D., Jr., Kansas City
Biggs, Fred J., Jr., Poplar Bluff
Biggs, Harry L., Kansas City
Bikaless, Victor W., Kansas City
Biller, Hugh F., St. Louis
Bills, Marvin L., Kansas City
Bilsky, Nathan, St. Louis
Bindbeutel, Donald A., St. Louis
Binder, Morton A., St. Louis
Bingham, Hal G., Columbia
Bincher, John L., St. Louis
Bird, H. Waldo, Jr., St. Louis
Birenbaum, Aaron, St. Louis
Birge, Clifford A., St. Louis
Birsner, Frank H., Carthage
Bishop, Marion D., Florissant
Bishop, Mary M., St. Louis
Bisno, Daniel, St. Louis
Black, Don A., Kansas City
Black, Eugene C., Kansas City
Black, Samuel P. W., Columbia
Black, Thomas C., Jr., Kansas City
Blacklock, David E., King City
Blackman, Nathan, Kirkwood
Blackmore, Thomas A., Windsor
Blackwell, Charles R., University City
Blackwell, Charles W., Columbia
Blades, Ross D., Springfield
Bladow, Terrence C., Joplin
Blair, Vilray P., Jr., St. Louis
Blalock, Robert W., Marshall
Blank, Michael K., De Soto
Blankenship, Dale M., Cape Girardeau
Blankenship, George W., Neosho
Blanton, J. C., Sikeston
Bleich, Virgil R., St. Louis
Blim, Richard D., Kansas City
Block, Arnold S., St. Louis
Block, J. E., Sedalia
Bloom, W. A., Fayette
Blount, Lee, Jr., St. Louis
Bockelman, Clifford H., Brentwood
Boedeker, Roy V., St. Louis
Boemer, Lilburn C., St. Louis
Boger, James W., Sedalia
Bohnsack, Ralph W., Brookfield
Boldizar, Albert G., St. Louis
Boldt, Thomas H., St. Louis
Boles, C. Read, Clayton
Bolinske, Robert E., St. Louis

Bolozos, George D., Florissant
Bondurant, Bryce H., St. Louis
Bonebrake, M. D., Springfield
Bonfanti, Albert L., St. Louis
Bonifacio, Andres S., Crystal City
Bonniuk, Isaac, St. Louis
Bonner, John T., Columbia
Bonney, Samuel C., Washington
Boone, Daniel C., Kansas City
Boone, Martin H., Jr., Springfield
Boonshaft, Benje, St. Louis
Bordy, Marvin D., Kansas City
Borenstine, Joseph, Kansas City
Borowsky, Benjamin A., St. Louis
Borsuk, Gregory M., Kansas City
Bortnick, Arthur H., St. Louis
Bortnick, Eugene, Kansas City
Boswell, John R., St. Louis
Boteler, George M., Kansas City
Botwin, Arnold E., Kansas City
Boughnou, Harvey P., Kansas City
Bourke, Thomas E., St. Louis
Bourke, Timothy S., Kansas City
Boutros, Amin, Kansas City
Boveri, Joseph C., St. Louis
Bowdern, Edward H., Richmond Heights
Bowe, Edwin Earl, Jefferson City
Bowen, Stephen F., Jr., St. Louis
Bowerman, Harold H., St. Louis
Bowers, James E., St. Louis
Bowersox, Warren A., Pacific
Bowles, G. Robert, St. Louis
Bowles, Richard P., Liberty
Bowles, William T., St. Louis
Bowman, Melvin C., Neosho
Bowser, John F., Kansas City
Boyarsky, Saul, St. Louis
Boyce, John Milton, Mexico
Boyd, Arthur M., St. Louis
Boyd, George K., Kansas City
Boydston, Catherine, Odessa
Boydston, W. Wayne, Odessa
Boyer, Philip A., Jr., Kansas City
Boylan, Peter C., Kansas City
Boylon, Teresita C., Columbia
Bozzo, Raymond J., Washington
Braby, Howard H., Independence
Bradford, John F., Kansas City
Bradley, Frank R., St. Louis
Bradley, Richard V., Clayton
Bradley, William W., Centralia
Bradshaw, W. D., Clinton
Brady, Arthur M., Kansas City
Brady, Charles H., Sedalia
Brady, Harry R., St. Louis
Brady, Hugh S., Concordia
Brams, Jack B., Kansas City
Brand, Earl L., Webster Groves
Brangle, Robert W., St. Louis
Brasher, Ben H., Lexington
Brasher, Charles A., Mt. Vernon
Braufman, Harvey S., St. Louis
Braverman, Abe E., Kansas City
Braverman, Elliot M., Sedalia
Brazos, John C., Smithton
Bregant, Robert E., Jefferson City
Bremser, Harry L., St. Louis
Brennan, George A., St. Louis
Brennan, Patricia A., St. Louis
Brennan, Raymond J., Chillicothe
Brennan, Robert A., St. Louis
Brennan, Robert V., St. Louis
Brenner, Paul A., Owensville
Breton, Robert L., Kirkwood
Bricker, Eugene M., St. Louis
Bricker, Neal S., St. Louis
Brielaier, Charles R., St. Louis
Brion, Pacelli E., St. Louis
Briscoe, John R., Maplewood
Bristow, Robert B., St. Joseph
Broadus, Loren, Springfield
Brodeur, Armand E., Kirkwood
Bronson, Shael S., St. Louis
Brooke, Clement E., Columbia
Brookes, Robert D., St. Louis
Brookreson, Alton D., Poplar Bluff
Brookreson, Alton F., Poplar Bluff
Brother, George M., St. Louis
Broun, Coronwy O., St. Louis
Broun, Coronwy O., Jr., St. Louis
Brown, Adrian J., Kansas City
Brown, Daniel W., San Diego, Calif.
(Member St. Louis Medical Society)
Brown, David W., Springfield
Brown, E. Eugene, St. Louis
Brown, Elwyn S., Kansas City
Brown, Frederick B., Aurora
Brown, Irwin S., Kansas City
Brown, James M., St. Louis
Brown, James T., Springfield
Brown, John J., Fulton
Brown, Katherine S., Fulton
Brown, Lyman D., Springfield

Brown, Menzie H., Kansas City
Brown, Robert M., Neosho
Brown, Robert S., Kansas City
Brown, Seymour, St. Louis
Brownsberger, Robert H., Appleton City
Broyles, Watkins A., Bethany
Bruce, Helen L., St. Louis
Bruce, Leo A., Sikeston
Bruce, Paul C., Excelsior Springs
Brugger, Thomas, St. Louis
Brukardt, Diane, Columbia
Brumm, Lawrence W., Kansas City
Bruner, Claude R., Columbia
Brumer, Robert E., Kansas City
Bruns, Kenneth, University City
Brust, Carl H., Mission, Kan.
(Member Jackson County Medical Society)
Bryan, James H., Clayton
Bryan, William H., Jr., Kansas City
Bryan, William T. K., St. Louis
Bryant, Sydney L., St. Joseph
Bryant, T. J., Kansas City
Buben, Robert W., Hannibal
Buckingham, William, Kansas City
Buckner, Robert C., Kansas City
Buckthorpe, Thelma C., Sikeston
Bucy, James G., St. Louis
Budd, John J., Jr., St. Louis
Budke, Harold A., Kansas City
Buehler, Carl T., Jr., Eldon
Buesseler, John A., Lubbock, Texas
(Member Boone County Medical Society)
Buhler, Victor B., Kansas City
Buie, Bruce R., Kansas City
Bumgarner, James E., Columbia
Bumgarner, Roger W., Columbia
Bunting, Williston P., Kansas City
Burch, John E., Joplin
Burcham, Tom R., Jr., Farmington
Burde, Ronald M., St. Louis
Burford, Cyrus E., St. Louis
Burford, Edwin K., Jr., Cape Girardeau
Burford, Thomas H., St. Louis
Burk, E. K., Kansas City
Burke, Robert J., St. Louis
Burkey, Jordan W., Springfield
Burkhart, Charles A., St. Louis
Burkhart, Edward F., St. Louis
Burks, Jess E., St. Louis
Burneister, R. William, St. Louis
Burns, Francis J., St. Louis
Burns, Francis R., Hannibal
Burns, Thomas J., Springfield
Burns, Thomas W., Columbia
Burnside, Charles R., Kirkwood
Burry, Virgil F., Kansas City
Burst, Donald O., St. Louis
Burstein, Robert, St. Louis
Burton, Dale F., Hannibal
Busby, William E., Columbia
Busch, Anthony K., St. Louis
Busiek, Ervin F., Springfield
Busiek, Paul J., Springfield
Busiek, Urban J., Springfield
Busseman, Donald W., St. Louis
Butcher, Harvey R., Jr., St. Louis
Butcher, Robert W., Kansas City
Butler, E. F., St. Joseph
Butler, Patrick L., Joplin
Butsch, Richard H., St. Louis
Butterworth, Nelson S., Kansas City
Butts, James D., Rolla
Byer, John Albert, Columbia
Byers, Philip L., Kansas City
Byland, Benjamin F., Maryville
Byland, Samuel J., Wellsville
Bynum, William R., Columbia
Byrne, John E., St. Louis
Byrum, Fritz A., Ballwin

C

Cabonce, August L., Florissant
Caciolo, Carlo, St. Louis
Cacioppo, Joseph E., St. Louis
Cada, Edward G., Warrensburg
Cadice, John B., St. Louis
Caffrey, Raymond J., Kansas City
Cain, Alvin R., Lamar
Cain, Charles F., Caruthersville
Caldwell, Fred, Poplar Bluff
Caldwell, John K., Kansas City
Callahan, Donald E., Jennings
Callahan, Joseph D., St. Louis
Callaway, Guy D., Springfield
Callaway, Guy D., Jr., Springfield
Callihan, Charles F., West Plains
Callman, George, St. Joseph
Calodney, Martin M., St. Louis
Calovich, Emery R., Kansas City
Camel, H. Marvin, St. Louis
Camp, Richard V., Jr., Poplar Bluff

Campbell, A. J., Sedalia
Campbell, Cecil S., St. Louis
Campbell, Edward D., Cape Girardeau
Campbell, Frederick B., Kansas City
Campbell, James E., Macon
Campos, Francisco J., St. Louis
Canaan, Samuel A., Jr., St. Louis
Cancelada, Juan, Farmington
Canlas, Emilio M., Poplar Bluff
Cannon, Edward M., St. Louis
Cantor, Harvey E., St. Louis
Canty, Eugene J., St. Charles
Capetti, Alex P., Crane
Cappel, Fowl B., St. Louis
Capps, Eugene C., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Carleton, Charles E., Jr., Farmington
Carlin, Albert L., Stanberry
Carlin, M. Richard, St. Louis
Carlson, Arne E., St. Louis
Carlson, E. C., Poplar Bluff
Carlson, Hjalmar E., Kansas City
Carmichael, Francis A., Jr., Shawnee Mission, Kan. (Member Jackson County Medical Society)
Carmona, Gilberto V., Arnold
Carnell, B. M., Camdenton
Carnes, Victor M., Joplin
Carpenter, George T., St. Joseph
Carpenter, James L., St. Charles
Carpenter, Wallace, Rockport
Carr, Archie D., St. Louis
Carr, G. Thomas, St. Louis
Carr, Philip W., Springfield
Carranza, Mauro J., Hillsboro
Carrier, John A., St. Louis
Carrington, Howard W., Lebanon
Carroll, George A., St. Louis
Carroll, Grayson, St. Louis
Carroll, Percy J., Clayton
Carroll, Richard C., Crystal City
Carroll, Thomas W., Lamar
Carron, Joseph F., Arnold
Carron, Oscar A., Perryville
Carson, Richard A., Ballwin
Carter, Edwin E., Clayton
Carter, Howard, Hamilton
Carter, James R., Neosho
Carter, John F., St. Louis
Cartwright, Robert S., Columbia
Caruso, Alfred A., Kansas City
Cary, John M., St. Louis
Casady, Gilbert N., Kansas City
Casas, Julian R., St. Louis
Case, William F., Kansas City
Casebolt, Buford T., Kansas City
Casey, Edwin J., St. Louis
Cash, Charles R., Kennett
Cason, Elbert H., St. Louis
Cassel, Melvin A., St. Louis
Casson, Henry, St. Louis
Castillo, Michael E., Kansas City
Catalano, J. Denis, Maryland Heights
Catanzaro, Anthony F., St. Louis
Catanzaro, Francis J., St. Louis
Catanzaro, Rudolph E., St. Louis
Castro, Juan M., St. Louis
Cavanagh, Denis, St. Louis
Cavaness, Ernest W., Encinitas, Calif.
(Member Jackson County Medical Society)
Cayabyab, Pedro C., St. Louis
Cejas, Leandro P., Sikeston
Centner, Paul J., Kansas City
Chalkley, Judson L., Columbia
Challener, William A., III, St. Joseph
Chamberlain, Gilbert L., Boonville
Chambers, James Q., Jr., Kansas City
Chamness, James T., St. Louis
Chandler, Robert A., Kansas City
Chaplin, Hugh, Jr., St. Louis
Chapman, Charles L., Columbia
Chapman, David W., Independence
Chapman, James H., Kansas City
Chapman, Jean A., Cape Girardeau
Charles, Benjamin H., St. Louis
Charles, Francois R., St. Louis
Charnas, Raymond M., St. Louis
Chase, Ned B., Jr., Joplin
Chastain, Charles W., Farmington
Cheek, Charles W., Columbia
Cheek, J. William, Springfield
Chernoff, Selbert G., Kansas City
Cherre, Anthony J., St. Louis
Cherre, Charles J., St. Louis
Chesanow, Robert L., St. Louis
Chesney, George W., Joplin
Cheuk, Shu-sum, St. Louis
Chiasson, E. Chaille, Columbia
Chieffi, Margaret, St. Louis
Childs, Donnalea S., Kansas City
Childs, Richard M., Kansas City

Chiles, David R., Smithville
Chinsky, Murray, St. Louis
Chipongian, Raul A., Florissant
Choi, Byung Ho., St. Louis
Chou, Yen Ping, Koch
Christ, Martin H., St. Joseph
Christensen, Roger F., Louisiana
Christianson, Charles S., Mt. Vernon
Christy, Raymond A., Springfield
Chute, W. Deward, Moberly
Ciampa, Thomas, St. Louis
Ciapciak, Stanley J., St. Louis
Clark, Clarence L., St. Louis
Clark, Irving H., Kansas City
Clark, Kendall A., Jefferson City
Clark, Richard E., St. Louis
Clarke, Michael J., Springfield
Clary, William F., Springfield
Claseman, Wilma W., St. Louis
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Clayton, Edgar L., Springfield
Cleary, Frank, St. Louis
Clendenin, William W., St. Louis
Clever, Henry W., Jr., St. Charles
Cline, Harold H., Piedmont
Cline, Merle A., Kansas City
Clisham, John F., Hannibal
Clothier, Robert W., Independence
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Cobb, James R., Kansas City
Coben, Lawrence A., St. Louis
Coburn, Donald F., Kansas City
Cochran, Donald Q., Columbia
Cochran, Jo R., Cape Girardeau
Cochran, Thomas E., Jr., Springfield
Cochrane, Joseph J., Kansas City
Cockerell, Sanford F., Independence
Coffee, Amos L., Willow Springs
Cofey, T. N., Columbia
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Coffey, Ralph R., Kansas City
Coffin, Theodore A., Kansas City
Coffman, Esther E. L., Lakeworth, Fla.
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Cohen, Frank, St. Ann
Cohen, Harry K., Kansas City
Cohen, Hillard K., St. Ann
Cohen, Robert A., Kansas City
Cohen, Robert S., St. Louis
Coble, Richard R., Carthage
Cohrs, Clarence C., Moberly
Cokington, Leovigildo, Independence
Cokhame, Jack, Florissant
Colbert, Robert S., Sikeston
Coldwater, Kenneth B., St. Louis
Cole, William R., Smithton
Colglazier, Mary C., Kansas City
Collantes, Jose L., Marshall, Mo.
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Coller, Frederick B., Springfield
Collins, Gretchen D., Macon
Collins, John A., St. Louis
Collins, John M., St. Louis
Collodi, George A., St. Louis
Colom, George A., Kansas City
Colwill, Jack M., Columbia
Comas, Manuel R., Manchester
Comeau, Richard A., Dexter
Comens, Phillip, St. Louis
Comens, Ruth C., St. Louis
Comer, J. Russell, Kansas City
Commerford, John F., St. Charles
Compton, James R., Sarasota, Fla.
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Cone, Alfred J., Chesterfield
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Connell, Evan S., Kansas City
Connelly, Michael W., Florissant
Conrad, Adolph H., Jr., Clayton
Conrad, Joseph A., Chillicothe
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Cook, Thomas B., Richmond
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Cooper, Charles W., Jefferson City
Cooper, Claude W., Thayer
Cooper, Henry T., St. Louis
Cooper, James F., Florissant

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Cooper, Leo F., Kansas City
Cooper, Maurice E., Columbia
Cooper, R. Lee, Warrensburg
Cooper, Robert S., II, Warrensburg
Cooper, Theodore, Bethesda, Md.
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Cooper, Thomas J., St. Louis
Cope, James C., Columbia
Cope, Joseph S., Lexington
Coppinger, Thomas A., Kansas City
Corday, Robert J., St. Louis
Cordonnier, James K., Springfield
Cordonnier, Justin, St. Louis
Coronado, Mario A., Arnold
Correnti, Nicholas A., St. Louis
Cortez, Willie S., Lebanon
Cortner, Mary C., Kansas City
Costa, Dominic V., St. Louis
Costello, Cyril J., St. Louis
Costello, Joseph P., Jr., Brentwood
Costen, William S., St. Louis
Costrino, Joseph A., St. Louis
Cotley, J. H., St. Charles
Coughlin, Bertrand D., St. Louis
Courter, Larry P., Jefferson City
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Cowdrv, Edmund V., Jr., St. Louis
Cowherd, Joseph B., Kansas City
Cox, John P., St. Joseph
Cox, Kenneth E., Kansas City
Cox, Mary E., St. Louis
Cox, Robert D., St. Louis
Cox, William A., Jefferson City
Cox, William L., Liberty
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Cozart, Duane E., Chesterfield
Cozean, Charles H., Jr., Cape Girardeau
Craig, Alan G., St. Louis
Craig, Irwin T., Joplin
Craig, Owen W. D., St. Joseph
Craig, Richard O., St. Joseph
Crain, James W., Branson
Cramer, Quentin, Kansas City
Crawford, Archie L., Joplin
Crawford, Katherine J., University City
Crawford, Oral B., Springfield
Crawford, Robert M., Sullivan
Crayton, Billy G., Waverly
Creech, Joseph C., Troy
Cremer, William J., Fulton
Crespin, Stephen R., St. Louis
Crespo, Horacio T., Florissant
Crespo, Remedios R., Florissant
Crews, Robert N., Fulton
Crider, Russell J., St. Charles
Crighton, John C., Springfield
Criscione, James R., St. Louis
Criscione, James S., St. Louis
Crispell, Lawrence S., Joplin
Critchlow, Wm. C., Sikeston
Crocker, Albert M., Kansas City
Crockett, James E., Kansas City
Croom, Dorwyn W., Malden
Crosby, Alice S., Columbia
Cross, Albert D., Trenton
Crossman, Robert W., Webster Groves
Crotty, John P., St. Louis
Crouch, F. Richard, Farmington
Crow, Martin L., Kansas City
Crows, John T., Cape Girardeau
Crowell, Hugh C., St. Louis
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Cutler, Harold M., St. Louis
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D

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Dabbs, Wilbur D., Neosho

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 Daley, Frank R., Hamilton
 Daley, Phillip C., St. Louis
 Dalton, Arthur R., St. Louis
 Dalton, Timothy T., Kansas City
 Daman, George A., St. Louis
 Dames, Richard J., St. Louis
 Damron, Edward O., Elsberry
 Damron, Oscar H., Warrensburg
 Danforth, William H., St. Louis
 Danis, Peter C., St. Louis
 Danis, Richard K., St. Louis
 Dankner, Arnold, St. Louis
 Dann, David S., Kansas City
 Darnell, Dale E., Kansas City
 Darnell, Thomas F. B., Columbia
 Dash, Udaya N., St. Louis
 Daughaday, William H., St. Louis
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 (Member Jackson County Medical Society)
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 Davis, C. Braxton, Nevada
 Davis, Charles S., Joplin
 Davis, David, Columbia
 Davis, Donald R., Kansas City
 Davis, Edgar W., St. Louis
 Davis, Gustave L., St. Louis
 Davis, Herbert V., Kansas City
 Davis, Jack M., Kansas City
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 Davis, Mary A., St. Louis
 Davis, Richard E., Kansas City
 Davis, Robert C., Kansas City
 Davis, Wilbur L., Charleston
 Dawson, Richard, Columbia
 Day, Maxwell, McAllen, Texas
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 Dean, Francis D., Fayette
 Dean, Lee W., Jr., St. Louis
 Debanm, James W., Jr., St. Louis
 Decanini, Mario, St. Joseph
 Deeken, James H., Kansas City
 DeGenova, Gerald H., Ste. Genevieve
 Deitchman, Robert B., St. Louis
 De Jesus, Alberto, St. Louis
 de la Torre, John J., Sullivan
 DeLeon, Romualdo V., Arnold
 Deles, Vincente D., Crystal City
 Deligeorges, John, Kansas City
 Del Pizzo, Ferdinand, St. Charles
 Del Rosario, Horacio O., St. Louis
 Del Valle, Fernando, St. Louis
 DeMaria, Peter F., Kansas City
 DeMott, John D., Kansas City
 DeMotte, John A., Kansas City
 Dempsey, Herbert A., Lee's Summit
 Denk, Alan F., St. Louis
 Denney, Richard W., Mountain Grove
 Denninghoff, James C., Columbia
 Dennis, W. Paul, Flat River
 Denny, Hubert M., Union
 Denton, Robert E., Smithville
 Dernoncourt, John E., Smithville
 DeTar, Burleigh E., Joplin
 Dettmer, Robert F., Ironton
 de Ungria, Estelita Maria, St. Louis
 de Ungria, Pablo Calma, St. Louis
 Deutch, Max, St. Louis
 de Vera, Anson E., St. Louis
 Devine, John B., St. Louis
 Devine, Mark W., Jr., Kansas City
 Devins, George S., Kansas City
 DeVivo, Darryl C., St. Louis
 Dewald, Paul A., St. Louis
 DeWeese, Marion S., Columbia
 Dewein, Edward G., St. Louis
 Dexheimer, Frank R., Columbia
 Dexter, James D., Columbia
 Deyton, John W., St. Louis
 Dick, Earl, Blackwood, New Jersey
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 Diehr, Maurice A., St. Louis
 Diekroeger, Manuel L., Boonville
 Diemer, Peter A., Kirkwood
 Dierker, H. D., Farmington
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Diesselhorst, James A., Hazelwood
 DiLeo, Senatro W., Florissant
 Dill, Foster A., Maplewood
 Dillard, Burl M., St. Louis
 Dillard, Erin M., Springfield
 Dills, Joseph N., Springfield
 Dimond, E. Grey, Kansas City
 Dinelli, Frank E., Poplar Bluff
 Dinkins, James A., Cape Girardeau
 Diveley, Rexford L., Kansas City
 Dixon, John R., Brookfield
 Dixon, Vewiser L., Kansas City
 Dlabal, Luke J., Independence
 Dmytryk, Eugene T., St. Louis
 Doane, William L., Grandview
 Dodge, Mark, Kansas City
 Dodge, Milton, Shawnee Mission, Kan.
 (Member Jackson County Medical Society)
 Dodge, Philip R., St. Louis
 Doering, Robert W., Kansas City
 Doisy, Philip P., St. Louis
 Doisy, Robert A., Glendale
 Dolan, Daniel L., Springfield
 Dolan, John T., Jr., St. Louis
 Domann, Darrel D., Springfield
 Domke, Herbert R., Jefferson City
 Donaldson, Robert C., St. Louis
 Donati, Robert M., St. Louis
 Donegan, Judith H., Columbia
 Donegan, William L., Columbia
 Donley, Leo F., Jr., St. Louis
 Donley, Robert R., Monett
 Donnell, Harold E., De Soto
 Donnell, Robert H., Crystal City
 Donnell, Thomas A., DeSoto
 Dooley, Joseph M., Jr., St. Louis
 Dorsch, Ervin H., Independence
 Dorton, Robert K., St. Louis
 Doucette, Raymond C., St. Louis
 Dowd, James F., Jr., St. Louis
 Dowell, Donald M., Chillicothe
 Dowell, J. Larry, Pattonsburg
 Downey, James W., Kansas City
 Downey, Jon Patrick, New Madrid
 Doyle, Charles R., St. Louis
 Doyle, Matthew J., Jefferson City
 Drace, Charles C., Jr., St. Louis
 Drake, Avery A., Rolla
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 Drake, William K., Collinsville, Ill.
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 Draney, Thomas E., Kansas City
 Draper, Bernard, Rolla
 Dreher, Richard L., Kansas City
 Drescher, Emmett B., St. Louis
 Drews, Robert C., St. Louis
 Drey, Norman W., St. Louis
 Dreyer, Carl J., Webster Groves
 Dreyer, Philip V., Huntsville
 Dreyer, William F., Houston
 Drisko, Robert M., Kansas City
 Drowns, Bruce V., Kansas City
 Drum, Helen M., St. Louis
 Drury, Lawrence R., Kansas City
 Dubuque, Theodore J., Jr., St. Louis
 Duckworth, Gordon L., Jr., Hayti
 Duden, Charles W., St. Louis
 Duemler, John H., St. Louis
 Duemler, Robert H., St. Louis
 Duer, Mildred C., Kansas City
 Duffy, Adrian, St. Louis
 Duffy, Eileen, St. Louis
 Duffy, Francis G., St. Louis
 Duffy, Oliver F., Trenton
 Duggan, John J., Jr., Kirkwood
 Dukstein, Walter G., Kansas City
 Dulick, Michael, Brentwood
 Duling, Gerald J., St. Charles
 Dumonceaux, Leonard J., St. Charles
 DuMont, Clement C., St. Joseph
 DuMontier, R. J., O'Fallon
 Dunaway, Howard A., Sikeston
 Duncan, David, St. Charles
 Duncan, Robert D., Springfield
 Duncan, Wm. H., Kansas City
 Dunham, Robert H., N. Kansas City
 Dunleavy, James D., Kansas City
 Dunmire, George Q., Kennett
 Dunn, Robert E., St. Louis
 Dunshee, Robert E., Maryville
 DuPont, Jean-René, Sikeston
 Durnell, Monaford D., Lee's Summit
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 Durst, Henry, Fulton
 Dworin, Saul, St. Louis
 Dwyer, Frank X., Kansas City
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 Dwyer, Thomas L., Mexico

Dyer, Dallas J., St. Louis
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E

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 Eagleton, Mark D., Clayton
 Eanet, Morton P., Kansas City
 Earp, Ralph K., St. Louis
 Ebel, Eugene H., St. Louis
 Eber, Carl T., St. Louis
 Eberle, John P., St. Louis
 Eberle, Vincent L., St. Louis
 Echterhoff, Harry R., St. Louis
 Eck, Birkle, St. Louis
 Eckert, Decider, Pacific
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 Edelman, Alan H., St. Louis
 Edmond, Beauvoir H., St. Louis
 Edmonds, Robert W., Sedalia
 Edwards, D. R., Sedalia
 Edwards, Francis L., Monett
 Edwards, James E., St. Louis
 Edwards, Joseph C., St. Louis
 Edwards, Theodore F., Kansas City
 Edwards, Waldo B., Kirkwood
 Efron, Joseph, St. Louis
 Efstathianos, Kimon, St. Louis
 Egan, Robert C., St. Louis
 Egan, Thomas F., St. Louis
 Eggers, George W. N., Jr., Columbia
 Eggleston, Donald E., Macon
 Eggleston, Thomas F., St. Louis
 Eigelman, Jack R., St. Louis
 Eigel, Edwin G., St. Louis
 Eimer, Charles E., St. Louis
 Eismann, Gustave, Kansas City
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 Eisenmann, Benjamin P., New Haven
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 Eliasson, Sven G., St. Louis
 Eliscu, Juliette, Joplin
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 Ellersieck, Dorothy M., St. Louis
 Ellett, William H., Appleton City
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 Elliott, Wade E., Kansas City
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 Engman, Martin F., Jr., St. Louis
 Enloe, L. David, Jefferson City
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 Ernst, Joseph C., St. Louis
 Ernst, Richard E., St. Louis
 Ernst, Roland P., St. Louis
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 Esparrago, Francisco R., Jr., Monett
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 Esslinger, Arthur T. J., St. Louis
 Estes, Albert M., Cape Girardeau
 Estes, Jack M., St. Louis
 Esther, John R., Joplin
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 Eubank, Dillard M., Raytown
 Eubank, William R., Kansas City
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 Evans, Lawrence L., Kansas City
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Exon, C. Stuart, Jefferson City
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Eyerma, Charles H., St. Louis
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F

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Falk, O. P. J., St. Louis
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Farmer, Norma D., Farmington
Farney, Jacob P., Kansas City
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Fax, Nancy C., Kansas City
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Fehlman, Bernard F., Jr., St. Louis
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Feind, Earl E., Rolla
Feinstein, Leon A., St. Louis
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Feldman, David, St. Louis
Felix, Robert H., St. Louis
Feller, Harold H., St. Louis
Fellhauer, Carl M., St. Louis
Feltz, Lawrence W., Perryville
Ferguson, Donald S., Kansas City
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Ferguson, John P., Jr., Springfield
Ferguson, L. H., Jr., Joplin
Ferguson, Luther J., St. Joseph
Ferguson, Ralph L., Joplin
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Ferguson, Thomas B., St. Louis
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Files, James B., Jefferson City
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Fingert, Hyman H., St. Louis
Fink, LeRoy L., Florissant
Finkel, Barney W., St. Louis
Finkle, Robert H., Independence
Finley, Freeman L., St. Louis
Finn, Murray E., St. Louis
Finnegan, Joseph V., St. Louis
Fischer, Edward H., N. Kansas City
Fischer, Erich, St. Louis
Fischer, John R., Clayton
Fischer, Martin J., St. Joseph
Fischer, Theodore, Altenburg
Fischer, Thomas J., Hannibal
Fish, Richard, St. Louis
Fish, Virgil O., St. Louis
Fisher, Joseph L., St. Joseph
Fisher, Stanley D., Sedalia
Fishman, Marvin A., St. Louis
Fitch, C. H. Max, Springfield
Fitch, Coy D., St. Louis
FitzGerald, Leo P., St. Louis
Fitzgerald, Robert H., Kansas City
Fitzgerald, William T., St. Louis
Flance, Israel J., St. Louis
Flanders, Virgil E., Kansas City
Flanigan, George D., Jr., St. Louis
Flatley, John A., Kansas City
Flavan, David B., St. Louis
Fleishman, Alfred, St. Louis
Fleming, J. Will, Moberly
Fleming, Paul D., St. Louis
Fleming, Robert J., St. Charles
Fleming, Thomas S., Moberly
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Flores-Vega, Carlos H., St. Louis
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Flotte, Sylvester A., Florissant
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Flynn, James M., Kansas City
Flynn, John T., St. Louis

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Ford, Lee T., Jr., St. Louis
Ford, William, Farmington
Foreman, Phillip B., Hannibal
Forgrave, Leon P., St. Joseph
Forman, George W., St. Joseph
Forman, Louis H., Kansas City
Forsen, James A., Gower
Forsman, Waldo W., Jr., St. Louis
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Fotopoulos, Chris K., North Kansas City
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Fowler, Fred D., Kansas City
Fowler, I. Charles, N. Kansas City
Fowler, James W., Kansas City
Fowler, Marvin L., West Plains
Fox, Gerald E., St. Joseph
Fox, Leon J., St. Louis
Fox, Robert E., St. Louis
Francis, William C., Springfield
Francisco, Clarence B., Kansas City
Francka, W. Frank, Hannibal
Franco, Pilar Juan, Kansas City
Frank, Alvin R., St. Louis
Franklin, Curtis U., Kansas City
Franklin, Harold A., St. Louis
Franklin, Max S., St. Louis
Fraser, Richard A., Bonne Terre
Frawley, Thomas F., St. Louis
Frazier, Robert L., Charleston
Frederick, Raymond O., St. Louis
Freedman, Harold, St. Louis
Freedman, Ruth S., St. Louis
Freeman, David M., St. Louis
Freeman, Spencer L., Kirksville
Freiheit, Harold J., St. Louis
Freiman, S. Michael, St. Louis
Freimuth, L. E., St. Louis
Frein, Donald E., Harrisonville
(Member Jackson County Medical Society)
Frerking, Herbert W., St. Louis
Freund, Samuel J., St. Louis
Frick, John P., Kansas City
Friedman, Bernard, St. Louis
Friedman, Ira J., St. Louis
Friedman, Morris L., Kansas City
Friedman, Paul L., St. Louis
Friedman, Robert H., St. Louis
Friedrich, Ernst R., St. Louis
Fries, Armand D., St. Louis
Fries, John W., St. Louis
Friskel, Arthur K., St. Louis
Fritsch, Andrew J., Joplin
Fritzlen, Thomas J., Kansas City
Froelich, Edwin J., Lebanon
Froelich, R. W., Lebanon
Frumson, Guy H., St. Louis
Fryer, Minot P., St. Louis
Fuchs, George J., Barnett
Fuchs, George J., Jr., Columbia
Fuhman, Donald L., Kansas City
Fujita, Milton T., St. Louis
Fuleihan, Farid, St. Louis
Fulkerson, Wilbur E., Higginsville
Fulks, Richard B., California
Fullgrabe, Emil A., Jefferson City
Fulton, Albert E., Kansas City
Funsch, Robert E., St. Louis
Furla, Gus J., St. Louis
Furrow, Leonard T., Crystal River, Fla.
(Member St. Louis Medical Society)
Fury, Tex E., Kansas City
Fuson, Levi H., St. Joseph
Fuson, William A., Trenton

G

Gaffney, Caldwell J., St. Louis
Gafney, George T., St. Louis
Gagliardo, Joseph, St. Louis
Gaines, Albert, Kansas City
Gaines, Quentin M., Kirkwood
Gainey, Harold L., Kansas City
Gaitonde, Mangesh R., Kansas City
Galbol, Harley, Excelsior Springs
Galbreath, Ashford M., Kansas City
Gale, Arthur H., Overland
Gale, Joseph F., Chillicothe
Gale, Phillip R., St. Louis
Galeota, William R., Columbia
Galinsky, Leon J., Mt. Vernon
Gall, Ira, St. Louis
Gallagher, Lionel M., California
Gallagher, Neil I., St. Louis

Gandhuayr, Jack M., St. Louis
Gansloser, Wilbert M., Clayton
Gantner, George E., Jr., St. Louis
Gantt, Ernest S., Jr., Mexico
Gantz, John A., Affton
Garb, Solomon, Spivak, Colo.
(Member Boone County Medical Society)
Garcia, Charles L., Mexico
Gard, Raymond F., Wichita, Kan.
(Member Jackson County Medical Society)
Gardner, Joseph W., Reeds Spring
Garfinkel, Bernard T., St. Louis
Garner, James H., Kansas City
Garner, Lynn M., Jefferson City
Garrett, Glen H., Columbia
Garrison, David L., St. Joseph
Garrison, Norman A., Jr., Kennett
Garrison, Roy F., Kansas City
Garrison, T. W., Candenton
Garotto, Lewis J., Columbia
Gary, George, Marceline
Gaskins, John H., Kansas City
Gass, Michael, St. Louis
Gaston, Lamont W., St. Louis
Gaston, Samuel Lee, Joplin
Gauer, Robert J., Kansas City
Gaunt, Frank P., Webster Groves
Gaunt, William D., Columbia
Gauthier, Charles P., Kansas City
Gay, Andrew J., St. Louis
Gay, Elizabeth K., Florissant
Gearhart, Merriam, Bethany
Gearhart, Wilbur H., St. Louis
Gedney, William B., Valley Park
Geha, Alexander S., St. Louis
Geha, Braham J., Kansas City
Geiger, William A., Jr., Kansas City
Geise, August W., Jr., St. Louis
Gelman, Elliott F., Ballwin
Gempel, Paul A., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Gentry, Enoch N., Jr., Kansas City
Gentry, Marvin C., Ava
Gentry, Merritt L., Osage Beach
Gentsch, Kenneth W., Glendale
George, W. D., Monett
German, Walter A., Jr., Springfield
Germann, Donald R., Kansas City
Germuth, Frederick C., Jr., St. Louis
Gernstetter, Sangwill L., Poplar Bluff
Gerst, Aloysius C., Florissant
Gibson, David M., Kansas City
Gibson, Helen F., St. Louis
Gibstine, Marvin H., St. Ann
Giddings, Frank C., Springfield
Giem, Ross N., St. Louis
Gieselman, Ralph V., St. Louis
Giesler, Donald H., Osceola
Giffin, James M., Springfield
Gildea, Edwin F., St. Louis
Gildea, Margaret C. L., St. Louis
Gilden, Jerome J., St. Louis
Gilfillan, Earl E., Memphis
Gillen, Billy A., Kansas City
Gillespie, William J., St. Louis
Gilliland, Charles E., Cameron
Gillis, Roy, Branson
Gilpin, Doris C., St. Louis
Ginardi, Donald E., Kansas City
Ginsberg, Norman A., Kansas City
Girapamont, Prabhak, St. Louis
Gish, Rutledge, Fulton
Gist, William W., Kansas City
Gladney, John H., St. Louis
Glasgow, David S., Crystal City
Glass, Robert L., Sedalia
Glass, William J., Jr., Monett
Glassberg, Bertrand Y., St. Louis
Glasscock, Ernest L., Prairie Village, Kan.
(Member Jackson County Medical Society)
Glenn, Edward A., III, Kansas City
Glenn, Elmer E., Sun City, Ariz.
(Member Greene County Medical Society)
Glover, Jack F., Springfield
Glover, Kenneth, Mt. Vernon
Glynn, Robert R., Springfield
Gnade, Albert J., St. Louis
Godfrey, James J., Mexico
Goebel, James J., St. Louis
Goebel, Joan M., St. Louis
Goell, Robert S., St. Louis
Goldberg, Isadore E., Braymer
Goldenberg, Sidney, St. Louis
Goldenson, Max J., St. Louis
Goldfarb, Alvin, St. Louis
Goldkamp, John D., St. Charles
Goldman, Alfred, St. Louis
Goldman, Arnold M., St. Louis

Goldman, Hyman J., St. Louis
Goldman, Melvin L., St. Louis
Goldman, Stanley L., Kansas City
Goldring, Sidney, St. Louis
Goldsch, Edward, Kansas City
Goldstein, Marcy A., St. Louis
Goldstein, Marvin F., Kansas City
Gollub, Samuel W., St. Louis
Gomez, Cesar A., Jr., St. Louis
Gonzalez, M. Garza, Warrensburg
Goodman, J. N., Hardy, Arkansas
(Member St. Louis County Medical Society)
Goodman, Nathaniel, St. Louis
Goodrich, Harold A., Webster Groves
Goodson, Wm. H., Jr., Kansas City
Goodwin, Donald W., St. Louis
Goolsbee, Robert L., Kansas City
Gordon, James S., Jefferson City
Gordon, Morris P., Kansas City
Gore, Glenn L., St. Charles
Gorelick, David F., Springfield
Gorla, Wayne O., St. Louis
Gose, Don F., Springfield
Gottsch, Joseph C., Kansas City
Grabau, Gene H., St. Louis
Grable, James D., Portageville
Grabowski, Marie H., Kansas City
Grabske, Charles F., Independence
Grabske, Charles F., Jr., Independence
Gracia, Antonio J., St. Joseph
Graeser, Richard G., St. Louis
Graft, Ralph J., St. Louis
Graham, Patrick G., Kansas City
Graham, Wallace H., Kansas City
Graneto, Joseph A., St. Louis
Grant, Albert J., Hannibal
Grant, Claude S., St. Joseph
Grant, John M., St. Louis
Grant, Neville, St. Louis
Grant, Samuel B., St. Louis
Graul, Elmer G., St. Louis
Graul, Walter P., St. Louis
Graves, Arthur J., Mt. Vernon
Gray, Walter C., St. Louis
Greaney, John F., St. Louis
Grehel, Clement B., St. Louis
Green, J. Richard, Independence
Green, Manuel E., St. Louis
Green, Morton R., Belleville, Ill.
(Member St. Louis Medical Society)
Green, William R., St. Louis
Greenberg, Charles, Los Angeles, Calif.
(Member Buchanan County Medical Society)
Greene, Harry L., Hannibal
Greene, W. Wallace, Kansas City
Greenlund, Nelson, Nevada
Greenman, Marshall B., Clayton
Gregory, Ralph W., Kansas City
Gresick, Robert J., St. Louis
Griege, Charles W., Florissant
Griffin, Donald R., Kansas City
Griffin, Evelyn, Buffalo
Griffin, Olin A., Jr., Buffalo
Griffin, William T., Columbia
Griffith, John A., Jr., Kansas City
Griffith, John K., Arnold
Griggs, James Y., St. Louis
Grim, Edward M., Columbia
(Member North Central Counties Medical Society)
Grimes, Manning E., St. Joseph
Grindon, Joseph B., St. Louis
Groce, George, Fulton
Gronau, Axel R., St. Louis
Grossman, Marvin, Fredericktown
Grove, Gulp W., Knobnoster
Growdon, John A., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Grubb, Paul H., Joplin
Grueb, Paul M., St. Louis
Gruenfeld, Gerhard E., St. Louis
Grunberg, Emile, Columbia
Grundmann, William H., St. Louis
Guastello, Mario I., Kansas City
Gubin, Alan S., Caruthersville
Guccione, Joseph B., St. Louis
Guhleman, Henry V., Jr., Jefferson City
Guidry, Lawrence J., Kansas City
Guldner, Edmond, Lamar
Gulick, Charles R., St. Louis
Gullett, Charles C., Kansas City
Gummels, Belmont B., St. Louis
Gundle, Sigmund, Kansas City
Gunn, Jack, Versailles
Gunn, Richard W., Kansas City
Gunn, Walter T., St. Louis
Gunter, Joe S., St. Joseph
Gurnee, Landon H., Jefferson City
Gustafson, Jon E., Independence
Guthrie, Richard A., Columbia
Guze, Samuel B., St. Louis

H

Haas, Harry D., Kansas City
Habib, Henry N., Kansas City
Haddock, James N., Webster Groves
Haen, Charles J., Springfield
Haffner, Heinz, St. Louis
Haffner, Joel J., Kansas City
Hagan, Daniel J., St. Louis
Hagar, David L., Kansas City
Hagebusch, Omer E., St. Louis
Hagemann, Paul O., St. Louis
Haggen, Margaret E., Lawrence, Kan.
(Member Jackson County Medical Society)
Hahn, Frederick W., Jr., Kansas City
Haight, John M., Kansas City
Haith, Edward E., Kansas City
Haith, Walter F., Kansas City
Haley, Ted M., Kansas City
Hall, C. Robert, Versailles
Hall, David G., Columbia
Hall, David W., Springfield
Hall, Durward G., Springfield
Hall, Eugene W., Ferguson
Hall, James W., Kansas City
Hall, Lee A., Clayton
Hall, Marvin F., Joplin
Hall, Preston C., St. Louis
Hall, Ralph R., Kansas City
Hall, Robert A., St. Louis
Hall, Robert T., Kansas City
Hall, Stanley C., Hannibal
Hall, Thomas B., Arrow Rock
Hall, William K., St. Louis
Hallaba, M. A. S., Joplin
Hallazgo, Santiago Y., St. Louis
Halley, Robert H., Florissant
Hallinger, Earl S., Jr., St. Louis
Halloran, Mark J., St. Louis
Halperin, Phillip H., Kansas City
Halpern, Lawrence K., St. Louis
Hamill, Robert W., Kansas City
Hamilton, Caldwell K., Creve Coeur
Hamilton, Eugene G., Clayton
Hamilton, Eugene H., Joplin
Hamilton, John R., III, St. Louis
Hamilton, William P., Aurora
Hamilton, Wm. P., St. Louis
Hamlin, Wveth, Hannibal
Hammes, Roman E., St. Charles
Hammler, Christiana V., St. James
Hammond, David T., St. Louis
Hammond, John J., St. Louis
Hampton, Henry E., St. Louis
Hampton, Oscar P., Jr., St. Louis
Hampton, Stanley F., St. Louis
Hanau, Ernest B., Springfield
Handler, Eric, St. Joseph
Handler, Fred P., Jefferson City
Hankin, Norman M., St. Louis
Hanna, Fikri M., Mehlville
(Member Boone County Medical Society)
Hanna, Hugh A., Warrensburg
Hanna, Richard E., St. Louis
Hannas, Ralston R., Lake Forest, Ill.
(Member Jackson County Medical Society)
Hannas, Raymond R., Jr., Kansas City
Hansbrough, Eugene T., Poplar Bluff
Hansel, French K., St. Louis
Hansen, Arthur L., Butler
Hanser, Theodore H., St. Louis
Hanss, Armand W., Springfield
Hantman, Stephen L., Bridgeton
Hardacre, Ruth A., Kansas City
Hardin, William B., Jr., St. Louis
Hardwicke, Henry M., Ashland
Hardy, Guerdan, Clayton
Hardy, Henry M., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Hardy, John W., Kansas City
Hardy, Patrick J., Florissant
Hardy, Samuel W., St. Louis
Hardy, Stanton L., Desloge
Harell, Alex, St. Louis
Harford, Carl G., St. Louis
Harkins, William B., St. Louis
Harkness, Harry, Warrensburg
Harland, Robert E., Ironton
Harless, Morris S., Kansas City
Harlow, Lloyd M., Kansas City
Harmon, Ben C., Springfield
Harms, Florian L., Salisbury
Harns, James F., Nevada
Harned, Bert W., Olathe, Kan.
(Member Jackson County Medical Society)
Harner, Casper G., St. Joseph
Harper, Fleming B., St. Louis
Harrell, Henry J., Summerfield, Fla.
(Member Dallas-Hickory-Polk-Dade County Medical Society)

Harrin, William R., Kansas City
Harris, Charles W., St. Louis
Harris, Hugh S., Jr., Columbia
Harris, Robert J., Columbia
Harris, Solon P., St. Louis
Harrison, Lee B., St. Louis
Harrison, Richard L., St. Louis
Harrison, Stratton W., Springfield
Harrison, Winston E., Columbia
Hart, L. Wayne, Kansas City
Hart, Martin M., Salem
Hart, William M., Columbia
Harting, Hugh R., St. Louis
Hartman, Paul T., St. Louis
Hartnett, Leo J., St. Louis
Hartnett, Thomas D., St. Louis
Hartstein, Jack, St. Louis
Hartwig, Frederick H., Kansas City
Hartwig, John A., St. Louis
Hartwig, Raymond W., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Harvey, Harold D., Springfield
Harwell, J. Larry, St. Louis
Harwell, J. Lester, Lubbock, Tex.
(Member Butler-Wayne-Ripley County Medical Society)
Hasek, James A., Mountain Grove
Hasek, O. Martin, Mountain Grove
Hasenmueller, James J., St. Louis
Hasselblad, Oliver W., New York, New York
(Member North Central Medical Society)
Hata, Daikichi, Boonville
Hatfalvi, Bela I., St. Louis
Hauser, Robert J., Jefferson City
Hausheer, Herman J., Independence
Haw, Marvin T., Jr., Columbia
Hawk, Bray O., St. Louis
Hawker, William D., St. Louis
Hawkins, George L., Jr., St. Louis
Hawkins, Lee W., Chesterfield
Hayek, Wesley E., Florissant
Hayes, Lawrence L., Kansas City
Hayes, Paul W., St. Joseph
Haynes, James W., St. Louis
Haynes, Robert C., Marshall
Haynes, Solon E., Kansas City
Haynie, William W., Butler
Hazen, Robert M., Kansas City
H'Doubler, Charles E., Springfield
H'Doubler, Francis T., Jr., Springfield
H'Doubler, Peter B., Springfield
Headrick, John A., St. Louis
Hecker, Joseph E., Poplar Bluff
Hedges, Richard C., Excelsior Springs
Heeb, Max A., Sikeston
Heideman, Milo L., St. Louis
Heifetz, Carl J., St. Louis
Heilman, Edward J., Kansas City
Heins, James N., St. Louis
Helbing, Edward J., Alameda, N. M.
(Member St. Louis County Medical Society)
Hellerstein, Stanley, Kansas City
Hellweg, Charles E., Mt. Vernon
Hellweg, Raymond W., Florissant
Helm, James O., New Florence
Helman, Richard G., Kansas City
Henderlite, John W., Creve Coeur
Hendin, Aaron, Olivette
Hendren, Thomas H., Kansas City
Hennelly, John J., St. Louis
Henry, Clarke Latta, Kansas City
Henry, Robert D., Harrisonville
Henschel, Eugene V., St. Louis
Herbert, Charles T., Cape Girardeau
Herfkens, Kenneth D., Springfield
Herman, Allen L., St. Joseph
Herman, Edwin M., Kansas City
Herman, Morris, St. Louis
Hernandez, Salvatore, St. Louis
Herrman, George V., Kansas City
Hershey, Falls B., Kenilworth, Ill.
(Member St. Louis County Medical Society)
Hertel, Ronald C., St. Louis
Herzog, Godofredo M., Florissant
Hietlage, Louis P., Troy
Heusler, Anton E., St. Louis
Heutel, Lee B., Ballwin
Heyer, Oscar C., St. Louis
Hibbard, Blaine Z., Kansas City
Hickerson, William H., Independence
Hickey, Glenn M., Manchester
Hickey, James L., St. Louis
Hickey, Robert F., St. Louis
Hicks, Robert S., St. Louis
Higgins, Philip C., St. Louis
Hilbert, Paul H., St. Louis
Hildreth, H. Rommel, St. Louis
Hill, Jack H., Kansas City
Hill, James E., Fulton
Hill, XaCadene A., St. Louis

Hilliard, Alphonso, St. Louis
Hills, Joseph E., Springfield
Hilton, Paul E., Kirksville
Hinds, R. David, Hannibal
Hink, Frederick W., Independence
Hironimus, John, St. Louis
Hirsch, Joe E., Kansas City
Hite, Dennis E., Lebanon
Hoadley, William D., Kansas City
Hoard, Joseph W., Webster Groves
Hobbs, John E., St. Louis
Hector, Emmett F., Farmington
Hodge, Robert H., N. Kansas City
Hodgson, Frank H., Kansas City
Hodgson, Sheila, St. Louis
Hoeck, George P., Jr., Kansas City
Hoelscher, Harold F., Warrenton
Hoepfer, Samuel D., Grandview
Hoffman, Jacob S., Kansas City
Hoffmann, Augustin D., St. Louis
Hoffmann, Lee Martha, Kansas City
Hoffmann, R. Lee, Prairie Village, Kan.
(Member Jackson County Medical Society)

Hoffmann, Ronald E., St. Louis
Hoffing, Charles K., St. Louis
Hofstatter, Leopold, Afton
Hogan, Cornelius E., St. Louis
Hogan, Daniel F., Brownsville, Texas
(Member Jackson County Medical Society)

Hogan, John R., St. Louis
Hogan, Patrick C., St. Louis
Hogancamp, Glenn E., Ballwin
Hogeboom, George W., Delray Beach, Fla.
(Member Greene County Medical Society)

Hogue, Frank S., Kansas City
Hoja, W. Alexander, Poplar Bluff
Holbrook, Charles K., St. Louis
Holcomb, John K., Cape Girardeau
Holemon, R. Eugene, St. Louis
Holland, Robert D., Springfield
Holley, Donald B., Camdenton
Hollinger, Lloyd A., Kansas City
Hollingsworth, Ray S., Clinton
Hollis, Richard W., Springfield
Hollo, Vencel W., St. Louis
Hollocher, Richard J., St. Louis
Holloway, Robert B., St. Louis
Hollweg, Kenneth C., Kansas City
Holmes, Daniel E., Springfield
Holmes, David R., Springfield
Holscher, Edward C., St. Louis
Holt, Earl P., Jr., St. Louis
Holt, Waldo S., Kansas City
Holt, William E., St. Louis
Holton, Edward B., Independence
Holtz, Alan S., St. Louis
Holtz, Sumner, St. Louis
Holtzman, Samuel, Chicago, Ill.
(Member Jasper County Medical Society)

Hook, Waller G., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Hoover, Bernard L., St. Louis
Hoover, H. Lee, Jr., Springfield
Hopkins, Florian G., Gideon
Hopkins, James P., Kansas City
Hopkins, Thomas J., Sedalia
Hopkins, T. Spencer, Sedalia
Hori, Jose M., Columbia
Horn, Paul C., Cape Girardeau
Horner, John L., St. Louis
Hornstra, Robijn K., Kansas City
Horton, James D., Springfield
Horwitz, Irwin B., St. Louis
Hosto, Leland E., St. Louis
Houck, Russell M., Kecoughtan, Va.
(Member Clay County Medical Society)

Houston, Vincent T., St. Louis
Howden, Thomas L., St. Joseph
Howe, Albert L., St. Louis
Howe, Louis F., St. Louis
Howell, Billy D., Brookfield
Hoxworth, Gerald M., Cape Girardeau
Hubbard, Sally L., Springfield
Hubbell, Ira C., Columbia
Huber, K. Herbert, Richmond
Huber, Lasley E., Moberly
Huck, Frank F., Fenton
Huck, Richard F., St. Louis
Huckstep, Robert A., Farmington
Huddleston, Harvey T., Smithville
Hudgens, Richard W., St. Louis
Hudson, G. R., Moberly
Hueser, James N., Columbia
Huet, Raul, Kansas City
Huewe, Douglas A., Springfield
Huggins, Albert M., St. Louis
Hughes, Judson M., St. Joseph
Hughes, Robert G., St. Louis
Hughes, Shelby B., Clinton
Hulbert, Bernard, St. Louis

Hulstra, Johannes F. W., Springfield
Hummel, Anton J., St. Louis
Hummel, William C., St. Louis
Humphrey, James, Mound City
Humphreys, Edward T., Boonville
Hungate, Carroll P., Kansas City
Hunleth, Frank E., St. Louis
Hunt, John L., Poplar Bluff
Hunt, John W., Jr., Farmington
Hunt, Robert S., Cape Girardeau
Hunt, Thomas R., Kansas City
Hunter, Martin P., Kansas City
Huntington, Ione, Mt. Vernon
Hunzicker, Warren J., Kansas City
Hurd, James R., St. Charles
Hurst, Wilfred W., Joplin
Hurwitt, Frank, Kansas City
Huse, William J., II., Kansas City
Husted, George W., Parma
Hutchinson, James H., Jr., St. Louis
Hutchinson, William B., St. Louis
Hutto, A. Herman, St. Louis
Hyde, Lawrence L., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Hyman, Anna, St. Louis

I

Ibaviosa, Alfred C., Crystal City
Ide, Carl H., Columbia
Ide, Lucien W., St. Joseph
Imes, Elvin D., Maryville
Ingham, Walton C., Kansas City
Inkley, John J., St. Louis
Ippensen, John H., Springfield
Irlick, Carl C., Naples, Fla.
(Member St. Louis County Medical Society)

Irvin, William M., St. Louis
Irvine, John W., Kansas City
Irwig, Fred, Kansas City
Isbell, Charles H., Carthage
Ise, Frank H., Kansas City
Islam, Mohammed N., Manchester
Isom, Waldo B., Knox City
Ittner, George W., Jr., St. Louis
Ivy, Henry B., Springfield
Izmirlan, Grant, St. Louis

J

Jackson, Edward K., Clarksville
Jackson, Haywood R., Kansas City
Jackson, Robert L., Columbia
Jackson, Vernon B., Fulton
Jackson, William R., Maryville
Jacob, Karl A., Jr., St. Louis
Jacob, Walter P., Kansas City
Jacobs, Charles C., St. Louis
Jacobs, Frederick A., St. Louis
Jacobs, Morton, Kansas City
Jacobs, Walter H., Kansas City
Jaeger, Joseph N., Jackson
Jaffe, Bernard M., St. Louis
James, Otis E., Jr., Kansas City
Jameson, James E., Springfield
Jamison, Rex L., St. Louis
Janes, Donald R., Kansas City
Janney, James C., Jr., St. Louis
Jansen, Robert, Kansas City
Jaudon, Joseph C., St. Louis
Jean, J. Ted, St. Louis
Jeans, Virgil, Joplin
Jenab, Morteza, Kansas City
Jennett, James H., Kansas City
Jensen, Joshua E., Florissant
Jick, Sidney, St. Louis
Jimenez, Jose, St. Joseph
Jobe, Charles L., Jr., Springfield
Joffe, William S., St. Louis
Johnson, C. Laurence, Kansas City
Johnson, Charles S., Warrensburg
Johnson, Dallas A., Kansas City
Johnson, Earl W., Cape Girardeau
Johnson, Edgar W., Jr., Kansas City
Johnson, Ernest D., Cape Girardeau
Johnson, George A., Springfield
Johnson, James S., Kansas City
Johnson, Joseph E., Kansas City
Johnson, Maurice N., St. Louis
Johnson, Mitchell D., Ferguson
Johnson, Noel M., Springfield
Johnson, Richard E., Columbia
Johnson, Richard L., Kansas City
Johnson, Roy, Ferguson
Johnson, Thomas M., Kansas City
Johnson, Warford B., Springfield
Johnson, William F., Springfield
Johnston, Glen P., St. Louis
Johnston, Joseph L., Springfield
Johnstone, John, Jr., Kirkwood
Johnstone, Paul N., Kansas City
Jolly, Benjamin N., Mexico
Jolly, William H., Mexico
Jonas, Harry S., Jr., Independence

Jones, Andrew B., Soddy, Tenn.
(Member St. Louis Medical Society)
Jones, Augustin, St. Louis
Jones, David N., New Madrid
Jones, Dorothy J., St. Louis
Jones, Edna M., Clinton
Jones, Edward S., Harrisonville
Jones, Gale O., Kansas City
Jones, Grey, St. Louis
Jones, Harold L., Springfield
Jones, James B., St. Louis
Jones, James H., St. Louis
Jones, John B., Columbia
Jones, Keith D., Warrensburg
Jones, Marion E., Kansas City
Jones, Otey S., St. Louis
Jones, Richard A., St. Louis
Jones, Samuel T., III, Kansas City
Jones, Theodore R., Kansas City
Jones, Victor, Brentwood
Jones, Vincent L., St. Louis
Jordan, Walter H., Grapeland, Tex.
(Member St. Louis Medical Society)
Jorel, Louis E., Hermann
Jorstad, Louis H., St. Louis
Joseph, Harold J., St. Louis
Joslyn, Harold L., St. Louis
Jost, Charles A., Florissant
Jotte, Richard F., St. Ann
Joyer, Robert M., St. Louis
Judd, Donald, St. Louis
Judge, Walter T., Crystal City
Judy, Joseph D., St. Louis
Juergens, William G., St. Louis
Jung, Christopher H., Kansas City
Jung, J. Marshall, Columbia
(Member Cape Girardeau County Medical Society)
Justus, John B., Kansas City

K

Kabir, Mohammed A., St. Louis
Kahler, Monte R., Bolivar
Kahn, Lawrence, St. Louis
Kahn, Marvin, Prairie Village, Kan.
(Member Jackson County Medical Society)
Kairuz, Bartholome C., St. Louis
Kaiser, George C., St. Louis
Kallenbach, Glen P., Mexico
Kamada, Tsutomu, O'Fallon
Kamakas, Nicholas, Florissant
Kaminsky, Watson W., St. Louis
Kamuran, Ozgoncu, St. Ann
Kanarek, Joseph, Kansas City
Kandt, Ray E., Jr., Kansas City
Kane, Clyde E., St. Louis
Kantor, Julius M., Kansas City
Kantor, Samuel, Kansas City
Kaplan, Alex H., St. Louis
Kappesser, Netajean B., St. Louis
Kappesser, Roland C., St. Louis
Karadimos, George, Ballwin
Karandjeff, Apostle D., St. Louis
Kardesch, Milton, St. Louis
Karl, Michael M., St. Louis
Karraker, Alvan G., Farmington
Karsh, Robert S., St. Louis
Kartus, Irving, Kansas City
Kaskie, Clifford R., St. Ann
Kasten, Melvin C., Cape Girardeau
Katf, Nicola, Kansas City
Kauffman, Ruth, Versailles
Kaufmann, Herbert H., Kansas City
Kaul, Philip G., Kansas City
Kay, Billy F., Kansas City
Kayanan, Jose C., Kansas City
Kayes, Jack, St. Louis
Kays, Kenneth M., Columbia
Keeble, Charles B., St. Louis
Keeler, James E., Kansas City
Keenoy, John J., St. Louis
Keffler, Karl L., St. Louis
Keim, John H., Cape Girardeau
Keitges, Pierre W., Kansas City
Keller, Louis, St. Louis
Keller, Maurice J., St. Louis
Keller, Robert M., Wentzville
Kellett, John G., Webster Groves
Kelley, Gilbert B., Savannah
Kelley, Robert W., St. Louis
Kelling, Douglas C., Kansas City
Kelling, Jordan, Waverly
Kelly, John J., St. Louis
Kelly, Marshall W., Jefferson City
Kelly, R. Emmet, St. Louis
Kelsey, Kenneth L., Aurora
Keltner, R. M., Jr., St. Louis
Kendall, Charles A., Kansas City
Kendall, Forrest H., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Kendig, John H., St. Louis
Kendis, Joseph B., St. Louis

Kennard, George K., Kansas City
 Kenney, Roy E., Neosho
 Kent, Bela K., Kansas City
 Kenzler, Jack I., St. Louis
 Keown, Kenneth K., Columbia
 Kernodle, Jefferson D., Kansas City
 Kerr, David N., St. Louis
 Kerr, Frank T., Monett
 Kerr, S. Earl, Columbia
 Kessler, Sheldon, Florissant
 Ketcham, William M., Kansas City
 Ketterman, Grace H., Kansas City
 Ketterman, Herbert L., Kansas City
 Kettner, Edward G., Kansas City
 Key, James S., Springfield
 Keyes, Edward L., Clayton
 Khan, Abdul G., St. Louis
 Khan, Chung H., St. Louis
 Khurana, Satish K., Kansas City, Kan.
 (Member Jackson County Medical Society)
 Kieber, Robert W., St. Joseph
 Kieffer, Roland S., St. Louis
 Kieffer, Victor B., Jr., Kirkwood
 Kienberger, Paul A., Independence
 Kiehl, Richard A., Fort Leonard Wood
 Kiene, Richard H., Kansas City
 Kienzle, Edward C., St. Louis
 Kilker, Clarence H., Normandy
 Kilker, Donald E., Normandy
 Kilo, Charles, St. Louis
 Kimball, Ireland W., Kansas City
 Kimball, Merritt H., Kansas City
 Kimberlin, Herbert C., Trenton
 Kimelman, Nathan, St. Louis
 Kimura, Richard Y., St. Louis
 Kinder, James A., Cape Girardeau
 Kinder, Jerry L., Cape Girardeau
 Kindred, Lynn H., Kansas City
 King, Elbert R., Boise, Idaho
 (Member West Central Missouri Medical Society)
 King, Eustace E., III, St. Louis
 King, Francis C., Kirkwood
 King, J. Tenbrook, Kansas City
 King, John V., Jr., St. Louis
 King, John V., Webster Groves
 King, Morris K., St. Louis
 King, Phillip E., Liberty
 King, Richard H., Clinton
 King, Robert J., Columbia
 King, Walter R., Kansas City
 Kingsbury, Helen, Shawnee Mission, Kan.
 (Member Jackson County Medical Society)
 Kingsland, Robert C., St. Louis
 Kinsella, Edward D., St. Louis
 Kinsella, Peter W., St. Louis
 Kinsella, Ralph A., Jr., St. Louis
 Kipnis, David M., St. Louis
 Kirk, Robert V., Kansas City
 Kirkland, Jerry A., Kansas City
 Kirschman, Robert E., Joplin
 Kirstein, Melvin B., St. Louis
 Kissane, John M., St. Louis
 Kister, George E., St. Charles
 Kistner, William F., St. Louis
 Kitchen, William M., Kansas City
 Klaff, Daniel D., St. Louis
 Klaus, Hanna, St. Louis
 Klebba, Larry B., Jefferson City
 Klein, Andrew G., St. Louis
 Klein, Arnold G., St. Louis
 Klein, Bert H., St. Louis
 Klein, Edward H., Prairie Village, Kan.
 (Member Jackson County Medical Society)
 Klein, Saul J., St. Louis
 Kleinschmidt, Clinton, St. Louis
 Klenk, Charles L., St. Louis
 Kline, Carolyn M., St. Joseph
 Kline, Edmund W., St. Joseph
 Klinge, Frederick W., St. Louis
 Klingner, George M., Springfield
 Klingner, George M., Jr., Springfield
 Klinkerfuss, George H., St. Louis
 Klippel, Allen P., St. Louis
 Klippel, Bernhard W., St. Louis
 Klockner, Richard J., St. Ann
 Klockner, Robert P., St. Louis
 Knabb, Arthur D., Springfield
 Knabb, Kenneth E., Springfield
 Kneal, E. Ellsworth, St. Louis
 Kneibert, Fred L., Poplar Bluff
 Knepper, Paul A., St. Joseph
 Knese, Luke A., San Juan Capistrano, Calif.
 (Member St. Louis Medical Society)
 Knight, Franklin P., St. Louis
 Knight, John S., Shawnee Mission, Kan.
 (Member Jackson County Medical Society)
 Knight, Lyle B., Lee's Summit
 Knight, William A., Jr., St. Louis
 Knipschild, Bedford F., Marshall

Knoch, H. Kermit, Kansas City
 Knock, Henry L., Kirkwood
 Knowles, R. R., St. Louis
 Knowlton, Norman P., Jr., St. Louis
 Knutson, Carl O., Columbia
 Koch, Robert E., Clayton
 Koehler, Charles A., Shawnee Mission, Kan.
 (Member Jackson County Medical Society)
 Koehler, George A., St. Louis
 Koehler, John W., Joplin
 Koehnig, Marvin J., Florissant
 Koerner, Kenneth A., St. Louis
 Koessel, Arthur W., St. Louis
 Kohler, Louis H., St. Louis
 Kolker, Allan E., St. Louis
 Kolze, Vernon W., Springfield
 Komanecky, William M., St. Louis
 Konzelmann, John A., St. Louis
 Koon, Ben H., Bolivar
 Koontz, Paul G., Kansas City
 Kopp, Jules H., St. Louis
 Kopp, Leonard J., St. Louis
 Koppentrink, Walter E., Jr., Higginsville
 Kopta, Joseph A., St. Louis
 Korenblat, Phillip E., St. Louis
 Korn, Robert L., Clayton
 Korth, William M., Sarasota, Fla.
 (Member Jackson County Medical Society)
 Kostianovsky, Jorge E., St. Louis
 Kotner, Lawrence M., St. Louis
 Koutsoumpas, William V., St. Louis
 Kovac, S. Robert, St. Louis
 Kowert, Edward H., St. Louis
 Kozal, Francis L., Crystal City
 Kozlowski, Albert E., St. Louis
 Kraft, Jacob, Kansas City
 Kramer, Fred, St. Louis
 Kramolowsky, Helmut H., St. Louis
 Kraner, Justin F., University City
 Kranson, Seymour J., Independence
 Kratz, Paul E., Cape Girardeau
 Krause, G. Lynn, Jr., St. Louis
 Krebs, Joseph M., St. Louis
 Krieger, John L., St. Louis
 Krojanker, Rolf, St. Louis
 Kromer, Charles, St. Louis
 Kronemer, Norton S., St. Louis
 Krueger, Haven C., Kansas City
 Kubin, Milford T., Columbia
 Kuczer, Arnoldo, Villa Park, Ill.
 (Member St. Louis Medical Society)
 Kuebrich, Thomas C., Ferguson
 Kuenzi, Donald E., Kansas City
 Kuhlman, Robert E., St. Louis
 Kuhn, John R., Jr., Joplin
 Kuhn, Nohuko O., St. Louis
 Kuhn, William F., II, Kansas City
 Kulak, Gary, St. Louis
 Kulowski, Jacob, St. Joseph
 Kurth, Robert K., St. Louis
 Kurtz, Karl J., Kansas City
 Kuruvilla, George, Kansas City
 Kurz, Rudolph F., Alton, Ill.
 (Member St. Louis Medical Society)
 Kutryb, Walter J., Florissant
 Kuttner, Marianne, St. Louis
 Kwan, Vincent W., St. Louis
 Kyger, John E., Independence

L

Lachance, Leopold, Centralia
 Lacy, Paul E., St. Louis
 Ladd, Charles B., St. Louis
 Ladenson, Roland P., Columbia
 LaDriere, Raymond J., Creve Coeur
 Ladyman, George H., Poplar Bluff
 LaHue, William C., Lexington
 Laird, John M., Jr., Florissant
 Lally, James J., Kansas City
 Lam, Robert L., St. Louis
 Lamar, Robert F., Kansas City
 Lamb, Wanda, St. Louis
 Lambert, Marian, Kansas City
 Lambie, Rodger W., Kansas City
 Lampton, Lawrence M., Kansas City
 Lamy, John E., Sedalia
 Landau, William M., St. Louis
 Landers, Burnell, Kansas City
 Landhuis, L. R., Columbia
 Landis, George K., Kansas City
 Landry, J. Hubert, St. Louis
 Lane, Clinton W., St. Louis
 Lane, Daniel K., St. Louis
 Lane, Jerald P., Minneapolis, Minn.
 (Member West Central Missouri Medical Society)
 Laney, Roland L., Carlsbad, Calif.
 (Member Jasper County Medical Society)
 Lang, John J., St. Louis
 Lange, Adolph C., St. Louis
 Langeluttig, Harry V., Jr., Nevada
 Langhus, Melvin O., N. Kansas City
 Langlois, Paul J., St. Louis
 Langston, Walter R., Springfield
 Lanier, Earl W., St. Louis
 Lankford, Harold D., Mexico
 Lanning, Richard C., Ste. Genevieve
 Lanning, Richard J., Kansas City
 Lanning, Robert J., Hannibal
 Lansche, Elmer A., St. Louis
 Lansche, W. Edward, St. Louis
 Lapi, Angelo, Shawnee Mission, Kan.
 (Member Jackson County Medical Society)
 Lapp, Harry C., Kansas City
 Larooca, Felix E. F., St. Louis
 Larsen, Kenneth V., St. Louis
 Larson, Paul U., St. Louis
 Lassar, Gilbert N., St. Louis
 Latham, Kenyon S., California
 Latham, Raymond W., Kansas City
 Latimer, Walter N. A., Hannibal
 Lattinville, Henry E., Florissant
 Lau, Luis, St. Louis
 Lauber, Joseph J., St. Louis
 Lauer, Daniel J., Kansas City
 Lauer, John D., St. Louis
 Laux, France A., St. Louis
 Lawrence, George H., St. Louis
 Lawrence, John R., Marshall
 Lawton, John T., St. Louis
 Lawton, Lawrence M., St. Louis
 Layle, John K., Jr., Kansas City
 Layton, Ira C., Kansas City
 Leach, Jon R., Maryville
 Leagus, Charles J., Jr., Springfield
 Leaky, John G., St. Louis
 LeBlanc, Leo J., St. Louis
 L'Ecuier, Jerome L., St. Louis
 Lederer, Charles M., Warrensburg
 Lederman, Joseph, St. Louis
 Lee, Carleton H., St. Joseph
 Lee, Henry A., Kansas City
 Lee, James B., St. Louis
 Lee, King Ying, Kansas City
 Lee, Yeu-Tsu, Columbia
 Leech, Charles A., Columbia
 Leech, Maurice P., Fayette
 Leeper, Sidlee W., Columbia
 Legan, John K., Kennett
 Lehman, Philip C., St. Joseph
 Lehman, Ralph A. W., St. Louis
 Lehner, Richard L., Kansas City
 Leidinger, Karl J., Republic
 Leifer, William W., Kansas City
 Leightner, William, St. Louis
 Leitch, Cecil G., Blue Springs
 Lembeck, Joseph A., St. Louis
 Lemmon, George B., Springfield
 Lenobel, Milton I., Clayton
 Lentz, Clark H., Kansas City
 Lentz, Harold C., Neosho
 Leo, William A., Kansas City
 Leonhardt, Erwin M., St. Louis
 Leroux, Gene H., Doniphan
 Lerwick, Everett R., St. Louis
 Leslie, Charles H., Kirkwood
 Leslie, J. Paul, Jefferson City
 Leslie, James T., Jr., Jefferson City
 Levey, Harry B., Kansas City
 Levey, Simon A., St. Louis
 Levin, Marvin E., St. Louis
 Levitt, Joseph, St. Louis
 Levy, Irwin, St. Louis
 Levy, Jerome F., St. Louis
 Levy, Morton A., St. Louis
 Lewellen, Charles H., Louisiana
 Lewin, Wilbur H., St. Louis
 Lewis, Charles R., St. Louis
 Lewis, James E., Jr., St. Louis
 Lewis, Noel R., Springfield
 Lewis, Ray B., Columbia
 Lewis, Revis C., Kansas City
 Leydig, Stanley M., St. Louis
 Liang, Howard S., St. Louis
 Liang, Jing C., Independence
 Lichtor, Alexander, Kansas City
 Lichter, Joseph M., Kansas City
 Lichty, Charles A., Shelby
 Lieb, Francis X., St. Louis
 Lieb, Otto, St. Louis
 Lieberman, B. Albert, Jr., Kansas City
 Lieberman, David M., St. Louis
 Liese, Grover B., St. Louis
 Lilly, Douglas R., St. Louis
 Lilly, Terry E., Jr., Kansas City
 Lindberg, Donald, Columbia
 Lindeman, Carl H., St. Louis
 Lindeman, John, St. Louis
 Lindgren, Carleton J., Independence
 Lindquist, Carl N., Reeds Spring
 Ling, Walter, Sepulveda, Calif.
 (Member St. Louis Medical Society)
 Link, Alexander J., St. Louis
 Link, Vance E., Independence
 Linsenmeyer, Charles M., St. Charles
 Linville, Howard E., Kansas City

Lipschitz, Ervin, St. Louis
Lipsitz, Ellis S., St. Louis
Lischer, Carl E., St. Louis
Lissner, Arthur B., O'Fallon
Little, Monroe H., St. Louis
Littlejohn, Robert T., N. Kansas City
Littmann, Lewis E., St. Louis
Litton, Lyle D., Springfield
Litwiller, R. W., Columbia
Litzow, Louis T., St. Louis
Livingston, Don, St. Louis
Llewellyn, Henry J., St. Louis
Lloyd, Ivan E., Kansas City
Lockhart, Charles E., Springfield
Lodwick, Gwilym S., Columbia
Loeb, Richard H., Springfield
Loeb, Virgil, Jr., St. Louis
Loeffel, Ellen S., St. Louis
Logue, John T., Columbia
Lohmar, Roland E., Columbia
Lohr, Robert W., St. Louis
Lohrenz, Lois H., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Loitman, Bernard, St. Louis
Londe, Alan M., St. Louis
Londe, Sol, St. Louis
London, Stanley L., St. Louis
Lonergan, Warren M., St. Louis
Long, Curtis W., Butler
Long, David S., Harrisonville
Long, Frank B., St. Louis
Long, R. Stacy, Kansas City
Long, Robert W., St. Louis
Longenecker, Joe L., Joplin
Longnecker, David E., Columbia
Lonsway, Maurice J., St. Louis
Lonsway, Maurice J., Jr., St. Louis
LoPiccolo, Vincent J., St. Louis
LoPiccolo, Vincent J., Jr., St. Louis
Lord, Richard E., St. Louis
Lorenc, Ernest, Springfield
Lorenzo, Edilberto B., Kansas City
Loriga, Martin S., St. Louis
Lotito, Carlos A., Kansas City
Lottes, James O., St. Louis
Loughhead, John R., Poplar Bluff
Loutzenhiser, James K., Kansas City
Lovett, Robert L., Springfield
Lovinggood, Thomas A., Cape Girardeau
Lowe, Alvin L., Sedalia
Lowe, Horace A., Jr., Springfield
Lowell, Paul, Kansas City
Lowenstein, Paul S., St. Louis
Lowrey, Ford J., Kansas City
Lowther, Gerald S., Ballwin
Loyd, Earl L., Holts Summit
(Member Cole County Medical Society)
Luangkesorn, Prasert, St. Louis
Lucas, G. Elden, St. Louis
Lucido, Joseph L., St. Louis
Lucke, Eugene M., Hannibal
Luckenbill, Paul T., Plattsburg
Luedde, Fullerton W., St. Louis
Luedde, Philip S., St. Louis
Luehrs, Robert O., St. Louis
Lugo, Samuel, St. Louis
Luh, Andrew, St. Louis
Lukens, John N., Jr., Columbia
Lum, Jon Tek, St. Louis
Lund, Herluf G., St. Louis
Lund, Robert H., Clayton
Lundgren, Fred H., Jr., Kansas City
Lurie, Harold H., Springfield
Lusk, Charles A., Jr., Butler
Luter, Carter W., Butler
Luther, George A., St. Louis
Lutkewitte, Joseph F., Ste. Genevieve
Lutz, Martin H., St. Louis
Lyddon, Harold R., Jr., Kansas City
Lyle, Robert R., Versailles
Lyman, Edward H., St. Louis
Lynxwiler, Chester P., St. Louis
Lyskowski, Maria, St. Louis
Lyss, Carl, St. Louis
Lyss, Stanley B., University City
Lyttle, Garnet C., St. Louis
Lyttton, George J., Kansas City

Mc

McAdam, Charles R., St. Louis
McAfee, C. Alan, St. Louis
McAfee, R. Gordon, Kansas City
McAlhany, Howard J., Springfield
McAlister, William H., St. Louis
McArtor, Thomas R., Browning
McBurney, Charles A., Slater
McCaffree, Mary K., Jefferson City
McCall, Edwin L., Kimberling City
McCalla, John P., Kansas City
McCallister, Ben D., Kansas City
McCann, Louis P., Nevada
McCanse, Andrew, Kansas City
McCarroll, Henry R., St. Louis
McCarthy, John M., St. Louis

McCarthy, Thomas D., Ferguson
McCaughan, John M., St. Louis
McClanahan, Robert C., Kansas City
McCloskey, R. Bruce, St. Louis
McClure, David N., St. Louis
McClure, James N., Jr., St. Louis
McCool, James F., Jr., St. Louis
McCool, Stanley G., St. Louis
McConchie, James E., Independence
McCord, E. Scott, Columbia
McCorkle, E. Lee, Marshall
McCormick, James E., Kansas City
McCormick, Vincent D., San Francisco, Calif.
(Member St. Louis Medical Society)
McCown, Allan H., Kirkwood
McCoy, Donald L., Marshall
McCoy, Frederick J., Kansas City
McCoy, Warren R., Caruthersville
McCracken, Samuel R., Excelsior Springs
McCraw, Doyle C., Bolivar
McCray, Glen M., Kansas City
McCubbin, Clarence R., Leawood, Kan.
(Member Jackson County Medical Society)
McCullough, Campbell C., Kansas City
McDaniel, John R., St. Joseph
McDermott, Alfred E., Perryville
McDonald, Eugene F., Jackson
McDonald, Victor G., Jr., Kansas City
McDonald, Wilbur P., St. Joseph
McDonnell, John F., Kansas City
McDonough, John, St. Louis
McElroy, Glenn L., Columbia
McFadden, Gene A., Waverly
McFadden, James F., Jr., St. Louis
McFadden, James F., Sr., St. Louis
McFarland, H. Richard, Kansas City
McFarland, Morris D., Kansas City
McGannon, Paul T., Kansas City
McGibbon, Bernard M., Bridgeton
McGinnis, Byron J., St. Louis
McGinnis, William F., St. Louis
McGinty, Charles P., Cape Girardeau
McGuire, Thomas H., Kansas City
McHanev, John W., Jefferson City
McIntosh, Donald E., Kansas City
McIntyre, John D., Kansas City
McKaskle, Clarence W., Caruthersville
McKee, Howard B., Joplin
McKee, Oliver A., Kirkwood
McKee, Wallace P., Kansas City
McKinney, Joseph K., St. Louis
McKinsey, John J., Springfield
McKinstry, Karl V., DeSoto
McKnelly, William V., Jefferson City
McKnelly, William V., Jr., Kansas City
McLain, Bobby M., Poplar Bluff
McLane, Jerry F., Poplar Bluff
McLaughlin, Kathleen, St. Louis
McLean, Harry A., St. Louis
McLean, Royal C., St. Louis
McLeod, John, Kansas City
McMahon, Bernard J., Clayton
McMillan, Thomas E., Kansas City
McMurray, Herbert C., Manchester
McNalley, Frank P., Clayton
McNalley, Michael, St. Louis
McNamara, John J., Richmond Heights
McNeel, Lee A., Jr., Greenfield
McNutt, Theodore L., Kansas City
McPhee, William R., Kansas City
McPheeters, James W., Poplar Bluff
McPike, Lloyd H., Joplin
McQueen, Samuel, St. Louis
McSwiney, John G., St. Louis
McVay, James R., Kansas City
McVay, James R., Jr., Kansas City
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M

Maben, Sam Edward, Kansas City
Macauley, Bernard J., Poplar Bluff
MacBrude, Cyril M., St. Louis
Maccubbin, Don A., Kansas City
MacDonald, Robert R., Jr., Chesterfield
Macdonald, William C., St. Louis
Macdonnell, Thomas M., Marshfield
MacGee, Edwin E., Kansas City
Machek, Otakar, St. Louis
MacInnis, Florence E., Kansas City
Mack, Mary L., address unknown
MacLaughlin, James C., Joplin
MacNaughton, Ralph E., Kansas City
MacNaughton, Robert A., Leawood, Kan.
(Member Jackson County Medical Society)
Macnish, James M., St. Louis
Macon, William L., Jr., St. Louis
Maddox, Albert R., Sedalia
Maddox, John D., Joplin
Maddux, William P., Springfield
Madrid, Dominador, St. Louis

Magaletta, George E., Cape Girardeau
Magee, Charles D., St. Louis
Magee, Robert L., El Dorado Springs
Magee, William E., St. Louis
Magidson, Joseph, St. Louis
Magill, Joseph S., Milan
Maginn, R. Reilly, St. Louis
Maginn, Richard L., St. Joseph
Magness, Guy N., University City
Magness, William C., Branson
Magrinat, Gaston, St. Louis
Mahe, George A., St. Louis
Maher, Robert W., Springfield
Maher, Thomas F., St. Louis
Maizus, Saul H., St. Louis
Malles, A. Conrad, Ballwin
Maloney, Robert M., St. Louis
Manalo, Gil B., Jr., Festus
Manansala, Antonio O., St. Louis
Mandler, George, Chillicothe
Manganaro, Frank J., St. Louis
Mangels, Kenneth A., Independence
Mangelsdorf, Thomas K., St. Louis
Manion, Peter J., St. Louis
Manley, Charles B., Jr., St. Louis
Mann, James K., Hannibal
Mansur, Edward E., Stuart, Fla.
(Member Cole County Medical Society)
Mantell, Jack M., Springfield
Mantz, Frank A., Kansas City
Manuel, Louis C., Kansas City
Maple, Francis M., Springfield
Maranan, D. L., Arnold
Maravilla, Levy M., St. Louis
Marban, Manuel L., St. Louis
Marco, Philip J., Columbia
Marcus, Morris D., St. Louis
Mardini, Edward E., Bonne Terre
Margolis, Richard M., St. Louis
Marienfeld, Carl J., Columbia
Markel, Arthur D., Poplar Bluff
Markel, Larry G., Kansas City
Marks, Mark M., Kansas City
Marmor, William A., St. Louis
Mars, Hartley F., Forsyth
Marsh, Alice, Pleasant Hill
Marsh, James M., St. Joseph
Marshall, Cameron F., Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Marshall, Hal E., Kansas City
Marshall, William G., Glasgow
Marston, F. James, Jr., St. Joseph
Martel, Dominique, St. Louis
Martin, Andrew D., Sikeston
Martin, Clarence A., Joplin
Martin, Clyde V., Kansas City
Martin, Daniel C., Kansas City
Martin, Daniel J., St. Louis
Martin, Forrest L., Nevada
Martin, Frederick W., Jr., St. Louis
Martin, J. Barlow, St. Louis
Martin, James M., Kirkwood
Martin, John N., St. Joseph
Martin, Maynard W., Houston, Tex.
(Member St. Louis Medical Society)
Martin, Richard H., Columbia
Martin, W. Joe, Louisiana
Martz, John C., St. Louis
Mason, Wayne E., Kansas City
Massie, Edward, St. Louis
Masters, William H., St. Louis
Masterson, Byron J., Kansas City
Masucci, Joseph M., Kansas City
Matteson, Frank B., Grant City
Matthews, John G., St. Louis
Matthews, John I., Jefferson City
Mattis, Robert D., Clayton
Maugh, Sydney B., St. Louis
Max, Paul F., St. Louis
Maxey, Hugh W., Jefferson City
Maxson, T. Reed, Warrensburg
Maxwell, Richard W., St. Louis
May, Albert L., Jr., Poplar Bluff
May, Mark, St. Louis
Mayer, John H., Jr., Kansas City
Mayer, Robert A., St. Louis
Mayer, William D., Columbia
Mayfield, James L., Crystal City
Mays, Frank G., Washington
Mazda, Abouzarjomehr, St. Louis
Meador, James R., St. Louis
Meagher, Arthur J., St. Louis
Medler, Francis J., St. Louis
Medler, John F., St. Louis
Medlicott, William J., Kansas City
Medrano, Crescenciano A., St. Louis
Medrano, Lina Ebro, St. Louis
Meegan, Robert J., Kansas City
Mehan, Donald J., St. Louis
Mehra, Ravinder B., St. Louis
Mehra, Usha, St. Louis
Meier, Francis X., Jefferson City

Meinberg, William H., St. Louis
 Meiners, Paul N., St. Louis
 Meiners, Theodore M., St. Louis
 Meinershagen, Charles W., Jefferson City
 Mejia, Hugo, St. Louis
 Melendez, J. Richard, Address unknown
 Melgaard, S. Ross, Kansas City
 Melick, William F., St. Louis
 Mell, Roger S., St. Louis
 Menchetti, Don E., Springfield
 Mendelsohn, Robert S., St. Louis
 Mendelson, David F., St. Louis
 Mendez, Manuel M., St. Louis
 Menendez, Manuel F., St. Louis
 Menendez, Silvana, St. Louis
 Mendonsa, Lawrence E., St. Louis
 Meneses, Orlando G., St. Louis
 Menne, Marvin G., Ironton
 Merenda, Sam J., St. Louis
 Merideth, Mary Jane, Cassville
 Meriwether, Don R., Mission, Kan.
 (Member Jackson County Medical Society)
 Merklin, Anton L., St. Louis
 Merrims, Theodore, St. Louis
 Merriitt, Burch A., St. Louis
 Merz, Jean J., Creve Coeur
 Mestres, Hugh M., St. Louis
 Metz, Charles O., St. Louis
 Metzgar, Marshall T., Columbia
 Metzl, Kurt, Kansas City
 Meyer, Herman M., St. Louis
 Meyer, James E., Manchester
 Meyer, Jay, Clayton
 Meyer, John S., St. Louis
 Meyer, Melvin E., St. Louis
 Meyer, Paul W., Kansas City
 Meyers, Elsie F., St. Louis
 Meyers, Harold L., Kansas City
 Meyers, John B., Clayton
 Meyers, Robert W., St. Louis
 Meyers, Rosellen E., Chicago, Ill.
 (Member Ozarks Medical Society)
 Mezera, Raymond A., St. Louis
 Michael, Harvey R., Springfield
 Michael, Kenneth D., St. Louis
 Michael, Vernon E., St. Louis
 Michaelree, John F., St. Louis
 Middleton, Jerry N., St. Louis
 Middleton, John W., Louisiana
 Mier, Thomas M., St. Louis
 Miksicek, John E., St. Louis
 Milder, Benjamin, St. Louis
 Miles, George O., Kansas City
 Miles, Glenn E., Louisiana
 Miles, Paul W., St. Louis
 Milgram, Byron A., Kansas City
 Mill, William B., Jr., Springfield
 Miller, Charles, Jr., Kirkwood
 Miller, Clinton L., Lee's Summit
 Miller, Clyde S., Waynesville
 Miller, D. Herbert, Muskogee, Okla.
 (Member Chariton-Macon-Monroe-Randolph County Medical Society)
 Miller, David V., Poplar Bluff
 Miller, Edward J., St. Louis
 Miller, Geoffrey W., St. Louis
 Miller, Gerald L., Kansas City
 Miller, Harold W., Willow Springs
 Miller, James E., St. Louis
 Miller, James R., St. Louis
 Miller, Jule P., Jr., St. Louis
 Miller, Leroy J., Columbia
 Miller, Max I., Kansas City
 Miller, Norman C., St. Louis
 Miller, Oliver J., Cape Girardeau
 Miller, Richard B., St. Charles
 Miller, Robert N., St. Louis
 Miller, Wilson H., Kansas City
 Millikan, Larry E., Columbia
 Millikin, Lester A., St. Louis
 Milne, J. L., Springfield
 Milster, Clyde R., St. Louis
 Miltenberger, Paul C., Kennett
 Minnigerode, Lana, Columbia
 Minnigerode, Turner L., Columbia
 Minnihan, Robert W., Chesterfield
 Minton, Robert S., Forest City
 Mirbaha, Mitchell M., St. Louis
 Mishkin, Marvin R., St. Louis
 Miskovsky, Emil F., St. Louis
 Missey, Wilburn C., Jr., St. Louis
 Mitchell, Andrew D., Kansas City
 Mitchell, Franklin L., Columbia
 Mitchell, John D., Kansas City
 Mitchell, Lynn D., Columbia
 Mitchell, Robert H., Kansas City
 Mitchell, Roy E., Salem
 Mitchell, Thomas I., St. Clair
 Mitra, Nirmal K., Kansas City
 Mixson, William C., Kansas City
 Moellenhoff, Robert W., Washington
 Moen, Berwyn H., St. Joseph
 Molden, Charles A., St. Louis
 Molony, Basil A., St. Louis

Montazee, Sam, St. Louis
 Monaf, William W., Jr., St. Louis
 Monat, Seymour, St. Louis
 Montani, Charles, St. Louis
 Montello, Samuel A., Kansas City
 Montes, Arturo C., Baden
 Montes-de-Oca, Julio, St. Louis
 Montgomery, Austin F., St. Louis
 Montgomery, James G., Kansas City
 Moon, Thomas R., Jr., St. Louis
 Mooney, Justin L., Shawnee Mission, Kan.
 (Member Jackson County Medical Society)
 Mooney, Marcel L., Kansas City
 Moore, Allen H., Jr., Branson
 Moore, Alva, St. Louis
 Moore, Carl V., St. Louis
 Moore, Harry G., St. Louis
 Moore, Harry G., Jr., St. Louis
 Moore, Robert A., Kansas City
 Moore, Walter L., St. Louis
 Moore, William E., Normandy
 Moranville, Benedict A., Columbia
 Moranz, John W., St. Louis
 Moreano, Armando H., Kansas City
 Morehead, William E., Malden
 Morest, F. Stanley, Cape Girardeau
 (Member Jackson County Medical Society)
 Morgan, David B., Kansas City
 Morgan, Harry C., St. Louis
 Morgan, Philip E., Jefferson City
 Morgan, Stephan S., St. Louis
 Morgan, Troy O., Jr., Albany
 Morgan, W. Thomas, Jr., West Plains
 Morley, Louise A., Shawnee Mission, Kan.
 (Member Jackson County Medical Society)
 Moroney, Jean M., Kansas City
 Morrin, Kevin C., St. Louis
 Morris, Alan H., St. Louis
 Morris, Harvey E., St. Louis
 Morris, Joseph H., Jr., Kansas City
 Morris, Mary E., St. Louis
 Morrison, Arlen, St. Louis
 Morrison, Donald H., Kansas City
 Morrison, T. A., Aurora
 Morse, John P., St. Joseph
 Morse, Marvin, St. Joseph
 Mortensen, Frede, St. Louis
 Morton, Paul C., Springfield
 Mosby, Larry Dee, Columbia
 Moseley, F. Thomas, Springfield
 Moseley, Otis O., Osage Beach
 Moses, Robert A., St. Louis
 Moss, Paul, Kansas City
 Mosser, Robert S., Kansas City
 Mothershead, John L., St. Joseph
 Motzel, Albert J., St. Louis
 Mount, Allan, Independence
 Mountjoy, Grace S., St. Louis
 Mowrer, Marie O., St. Louis
 Mowrey, William O., Jennings
 Muckerman, Richard I. C., St. Louis
 Mudd, J. Gerard, St. Louis
 Muelheims, Gerhard H., St. Louis
 Mueller, Adolph R., Jr., Joplin
 Mueller, Clarence E., St. Louis
 Mueller, Joseph A., St. Louis
 Mueller, Martin J., Kansas City
 Mueller, Morris A., St. Louis
 Mueller, Robert, St. Louis
 Mueller, Robert J., St. Louis
 Mueller, Wilbur K., St. Louis
 Muench, Albert H., St. Joseph
 Muenster, Vincent P., St. Charles
 Muether, Raymond O., St. Louis
 Mullarky, Wilbur A., Chesterfield
 Mullen, Jack, Bonne Terre
 Mullen, Leo M., Kansas City
 Mulligan, Leo V., St. Louis
 Mullinax, Orr, St. Joseph
 Mullins, Bernard L., N. Kansas City
 Mullins, John E., St. Louis
 Multhauf, Cyril J., Kansas City
 Mundy, Homer F., St. Joseph
 Mundy, William L., Kansas City
 Munsch, Girard A., St. Louis
 Murdock, Nathaniel H., St. Louis
 Murney, Joseph A., Washington
 Murphy, Bernard L., Hannibal
 Murphy, George E., St. Louis
 Murphy, James J., Kansas City
 Murphy, James P., St. Louis
 Murphy, John C., St. Louis
 Murphy, Paul, St. Louis
 Murphy, Robert J., Kansas City
 Murray, Wilber L., Kansas City
 Muschany, Norman K., St. Louis
 Musgrave, David E., Excelsior Springs
 Muth, Robert G., Kansas City
 Mutshnick, Clara P., St. Louis
 Myers, Ivan T., St. Louis
 Myers, James M., Rolla
 Myers, John S., Kansas City
 Myers, Robert M., Kansas City

N

Naim, Chung Chick, St. Louis
 Naime, Mansour J., Kansas City
 Nakada, James R., St. Louis
 Napper, Marvin L., Springfield
 Naryka, Joseph J., St. Louis
 Nash, Helen E., St. Louis
 Neal, M. Pinson, Columbia
 Near, David M., Florissant
 Needels, Orval T., Kansas City
 Neilson, Arthur W., St. Louis
 Nelson, Bentley A., Kansas City
 Nelson, J. Roger, Kirkwood
 Nelson, James S., St. Louis
 Nemec, Stanley S., St. Louis
 Ness, Carl K., St. Joseph
 Nesselrode, John H., Independence
 Nester, Charles A., St. Louis
 Neu, Leo T., Jr., Springfield
 Neubeiser, Ben L., St. Charles
 Neumann, James W., Kansas City
 Neun, William F., St. Louis
 Newcomb, Arthur D., Fredericktown
 Newman, Matthew, St. Louis
 Newman, Percy, St. Louis
 Newman, Robert L., Kansas City
 Newmark, Leonard N., St. Louis
 Newport, Gerald, St. Louis
 Newton, Gordon, St. Louis
 Newton, William T., St. Louis
 Nickel, James F., St. Louis
 Nickels, Mathew L., Louisiana
 Nickson, Charles E., Jr., Independence
 Nicolai, Charles H., St. Louis
 Nicolay, Kenneth S., Kansas City
 Niedermeyer, Edward L., Tarkio
 Niedermeyer, George J., St. Louis
 Niesen, Frank J., St. Louis
 Nieuwenhuizen, Maarten, Columbia
 Nigh, Charles A., St. Louis
 Nigro, E. Robert, Kansas City
 Nigro, Joseph A., Kansas City
 Nishi, Toshio, St. Louis
 Nixon, Edward E., Gallatin
 Noah, Joseph W., St. Louis
 Noback, Richardson K., Kansas City
 Nolan, Charles J., St. Louis
 Noller, Henry W., Overland
 Nolph, Georgia B., Columbia
 Noltensmeyer, Milton N., Kansas City
 Nomura, Roy M. Y., St. Louis
 Norland, Charles C., St. Louis
 Nouhan, Joseph G., Jr., St. Louis
 Nouri, Hassan, St. Louis
 Novak, Edward J., Kansas City
 Nuetzel, John A., St. Louis
 Nunez, Maria M., St. Louis
 Nunnally, Gordon M., Cape Girardeau
 Nussbaum, Paul B., Cape Girardeau
 Nussbaum, Robert A., St. Louis
 Nye, Robert S., St. Louis

O

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 Obermeyer, Charles G., St. Louis
 O'Brien, Edward C., St. Louis
 O'Brien, Harry F., Mexico
 O'Brien, James A., Joplin
 O'Brien, Liam, St. Joseph
 O'Brien, Robert M., St. Louis
 O'Connor, Robert J., Florissant
 O'Connor, William B., St. Joseph
 O'Donnell, Joseph V., St. Louis
 O'Dowd, James A., St. Louis
 Oehler, William F., Cape Girardeau
 Oetter, Donald L., St. Louis
 O'Farrell, Thomas P., Kansas City
 Ogilvie, John H., Gravois Mills
 Oglesby, Richard B., St. Louis
 Ognyanov, V. F., St. Louis
 Ogura, Joseph H., Ladue
 O'Hearne, John J., Kansas City
 Ohmoto, Masao, St. Louis
 Ojascastro, Alejandro C., St. Louis
 O'Keefe, Joseph D., St. Louis
 O'Kelly, Richard T., Kansas City
 Okun, Edward, St. Louis
 O'Leary, James L., St. Louis
 Olive, George C., Neosho
 Oliver, George A., Farmington
 Olmsted, William H., St. Louis
 Olney, John W., St. Louis
 Olson, Elbert R., Springfield
 Olson, Robert E., St. Louis
 O'Malley, James F., Kansas City
 O'Neal, Lawrence W., St. Louis
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 O'Neil, James H., Kansas City
 Onken, Henry D., St. Louis
 Oppenheimer, Henry E., Clayton
 Ordonkhanian, Tatool, St. Charles

O'Reilly, D. Elliott, St. Louis
Orenstein, Joseph M., St. Louis
Orgel, M. Norman, St. Louis
Orsay, Paul K., St. Louis
Orth, Oliver G., Columbia
Ortiguero, Leopoldo M., St. Louis
Ortillo, Amado P., St. Louis
Ortmeyer, Leroy F., St. Louis
Osborn, Retus W., III, Farmington
Osborne, Jere O., Kansas City
Osborn, Richard A., Fulton
Ossman, Julian A., Jefferson City
Ost, Mark D., Kansas City
Ostapowicz, Frank, St. Louis
O'Sullivan, Daniel F., St. Louis
O'Sullivan, George A., St. Louis
Ott, Harold J., II, St. Louis
Ott, Harold J., Maplewood
Ottensmeyer, Charles D., St. Louis
Otto, Thomas G., Cape Girardeau
Overend, Donald S., Springfield
Overesch, Harry B., Kansas City
Overholser, Milton D., Columbia
Owen, Robert F., St. Louis
Owens, Graham J., Kansas City
Owens, James L., Kansas City
Owens, John H., Sedalia
Owens, Richard L., Kansas City
Owens, Robert H., Kansas City
Ozar, Milton B., Kansas City
Ozenberger, Larry A., Plattsburg
Ozmat, Orhan, St. Louis

P

Packman, Robert C., St. Louis
Paddock, Charles S., Joplin
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Padilla, Teresita C., St. Louis
Paez, Mauro A., St. Louis
Page, Jesse W., Sikeston
Paine, Robert, St. Louis
Painter, Andrew E., Portageville
Painter, Lattie B., Jr., Portageville
Pakula, Sidney, Kansas City
Palazzo, Frank A., St. Louis
Palcheff, Chris L., Springfield
Palenske, Robert L., Hornersville
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Paletta, Theodore L., St. Louis
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Pareiman, Allen G., Kansas City
Paris, William H., Normandy
Park, George M., St. Louis
Park, William L., Jr., Springfield
Parker, Arthur C., Jr., Poplar Bluff
Parker, Brent M., St. Louis
Parker, Hubert M., Kansas City
Parker, Robert H., Kansas City
Parker, Thomas W., University City
Parker, William, St. Louis
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Parsons, Bernice, Albany
Parsons, D. LeRoy, Cape Girardeau
Parsons, Eugene O., Stilwell, Kan.
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Parvatikar, S. D., St. Louis
Pascoe, James J., Nevada
Passanante, Bartholomew M., St. Louis
Patrick, Roman L., Jr., St. Louis
Patterson, Donald R., Joplin
Patterson, Grover S., Carthage
Pavlu, Robert R., Waverly
Pawol, S. E., St. Louis
Payne, David E., Columbia
Payne, John W., Columbia
Payne, Meredith J., St. Louis
Payne, Vaughn C., St. Louis
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Peake, Glenn T., St. Louis
Pearman, Alan L., St. Louis
Pearman, Carl C., Columbia
Pearse, Roy W., Jr., Nevada
Pearson, Paul E., Kansas City
Peck, Chester R., Jr., Kennett
Peden, Burnet W., Clayton
Peden, James C., Jr., St. Louis
Peden, Joseph C., St. Louis
Peden, Joseph C., Jr., St. Louis
Peebles, J. B., Jr., Kirkwood
Peete, Don C., Kansas City
Pelz, Mort D., St. Louis
Pena-Ramos, Abelardo, Hannibal
Pence, F. Wendell, Carthage
Pendell, Paul W., Rolla
Penner, Stanley, Kansas City
Penninger, William H., Springfield
Pennington, Francis E., St. Louis
Pennoyer, James, Webster Groves

Pentecost, Richard L., Kansas City
Pepper, Max, St. Louis
Perez, Blanca M., St. Louis
Perez, Carlos A., St. Louis
Perez, Raul A., St. Louis
Perez-Mesa, Carlos, Columbia
Perez-Tamayo, Ruheri, Maywood, Ill.
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Perkins, David E., St. Louis
Perkoff, Gerald T., St. Louis
Perll, Maurice F., Kansas City
Perll, Rita D., Kansas City
Perna, Vincent P., St. Louis
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Pernoud, Flavius G., Jr., St. Louis
Pernoud, Michael F., St. Louis
Perry, Lawrence L., Jr., Kansas City
Perry, Ralph, Kansas City
Perry, William D., St. Louis
Petersen, Harold E., St. Joseph
Peterson, Bonita J., Kansas City
Peterson, Carl M., Kansas City
Peterson, Donald B., Fulton
Peterson, Frederick D., St. Louis
Peterson, George L., Kansas City
Peterson, Milton C., Sun City, Ariz.
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Peterson, Walter R., Kansas City
Petry, Ezra L., Overland Park, Kan.
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Pfeffer, Robert I., St. Joseph
Pfeifer, Oliver C., St. Louis
Pfuete, Edwin L., Kansas City
Philip, Varkey, St. Louis
Phillips, Hanford, St. Louis
Phillips, John J., St. Louis
Phillips, William J., St. Louis
Philpott, Gordon W., St. Louis
Phipatanakul, Supote, St. Louis
Piccione, Leonard N., St. Louis
Pickard, Clarence M., Columbia
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Pickens, E. Allen, St. Louis
Piepergerdes, Larry G., Columbia
Pierce, John A., St. Louis
Pierron, John B., Kansas City
Pifer, Lawrence H., St. Joseph
Pileggi, Felix A., N. Kansas City
Pilla, Lawrence A., St. Louis
Pimentel, Esperanz, St. Louis
Pineda, Hector O., St. Louis
Pingelton, William B., Columbia
Pinsker, Oscar T., Kansas City
Piper, August T., St. Louis
Piper, Donald K., Kansas City
Pipes, Keith E., St. Louis
Pipkin, Garrett, Clinton
(Member Jackson County Medical Society)
Pitsinger, Nolan B., St. Louis
Pitts, Ferris N., Jr., St. Louis
Platt, William R., Clayton
Platz, John H., Carrollton
Plax, Steven, St. Louis
Plesons, John D., St. Louis
Plowman, Edward M., Hannibal
Plumpe, W. Tupper, St. Louis
Plunkett, Littleton J., Poplar Bluff
Podos, Steven M., St. Louis
Podrecca, Guido I., Springfield
Poggemeier, William H., Jr., St. Charles
Politte, Lenard L., Columbia
Polk, George M., Sun City, Ariz.
(Member Jackson County Medical Society)
Pollack, Maxwell A., Chesterfield
Pollock, Leo H., Kansas City
Poonawala, Huseni E., Kansas City
Poor, Carl W., Neosho
Pope, Charles H., Jr., Independence
Popp, Carl G., Sikeston
Porporis, Arthur A., St. Louis
Porter, Jim C., Lebanon
Porter, Louis, Kansas City
Porter, Russell C., Seal Beach Calif.
(Member Clay County Medical Society)
Portugal, Antonio Q., St. Louis
Portuondo, Bonaventura C., St. Louis
Post, John P., Washington
Post, John R., St. Louis
Post, Stephen L., St. Louis
Post, Winfred L., Joplin
Potashnick, Robert, St. Louis
Potchen, E. James, St. Louis
Potter, Caryl A., Jr., St. Joseph
Potter, Lee G., Kansas City
Potter, Reese H., St. Louis

Potts, Donald A., Independence
Powell, Alan E., Independence
Powell, Charles B., Florissant
Powell, Earl A., St. Louis
Powell, Edwin M., Springfield
Powell, Nelson E., Kansas City
Powell, Robert G., Joplin
Powers, John M., Independence
Powers, Pierce W., St. Louis
Powers, William E., St. Louis
Pranger, Sylvester H., St. Louis
Prater, Bill G., Springfield
Pratt, Lindsay L., St. Louis
Prensky, Arthur L., St. Louis
Present, Cary A., St. Louis
Presnell, Cleitus A., St. Louis
Preston, Albert, Jr., Kansas City
Price, Kenneth C., St. Louis
Prieto-Basa, Nenita, St. Louis
Printz, Joseph H., Kansas City
Printz, Otto J., Kansas City
Probst, Raymond E., St. Louis
Probst, Jacob G., St. Louis
Proctor, Donald C., Sedalia
Prokop, Joseph R., St. Joseph
Prophete, B., St. Louis
Proskey, Vincent J., St. Louis
Pruett, Burchard S., St. Louis
Pruett, Hubert S., St. Louis
Pruett, Paul L., Springfield
Pu, Pin H., Kennett
Pucci, Gregory L., Kansas City
Pugh, Daniel D., St. Louis
Pugh, Reginald P., Columbia
Pugh, Richard G., Independence
Puls, Jerry L., Kansas City
Purcell, Harry K., St. Louis
Purcell, Paul L., Smithville
(Member Marion-Ralls-Shelby County Medical Society)
Pyne, Herbert S., St. Louis

Q

Quer, Erich A., Kansas City
Quick, Richard T., St. Louis
Quinn, Paul S., Springfield
Quistgard, Paul C., Hollister

R

Rabin, Erwin R., St. Louis
Racadio, Severo M., Kirkwood
Rachlin, Maxwell, St. Louis
Rader, Ada B., Kansas City
Rader, Edward S., St. Louis
Rader, George B., St. Louis
Radke, John D., St. Louis
Ragland, John E., Ballwin
Ragsdale, Edward, Scott Air Force Base, Ill.
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Ragsdale, George M., Paris
Raich, Robert A., Kansas City
Raines, Oney C., III, Kansas City
Rainey, Robert, St. Louis
Rainwater, Elmer H., Springfield
Rall, Kenneth L., Columbia
Ramey, Ehret O., Kansas City
Ramirez, Ricardo M., Poplar Bluff
Ramos, Americo G., Kansas City
Ramsey, Robert H., Florissant
Randolph, Bernard C., St. Louis
Rannie, Paul R., Independence
Rao, Carlo, St. Louis
Raper, Charles A., Poplar Bluff
Rapp, Earl L., Hannibal
Rapp, Harold B., Cape Girardeau
Rappold, H. O., St. Ann
Rawlins, Fred E., Cape Girardeau
Rayback, Harry E., St. Louis
Raynor, Richard, Marshall
Recano, Ricardo Q., St. Louis
Rector, Joe L., Jr., Kansas City
Reddin, Patrick C., Columbia
Redington, James C., Jr., Clayton
Redmond, William, St. Joseph
Reed, G. H., Osceola
Reed, Jonathan R., St. Louis
Reeder, Charles C., Smithville
Reese, A. Victor, St. Louis
Reh, Edward P., St. Louis
Rhem, Ralph, Dexter
Reich, Harry A., St. Louis
Reichert, M. Cecelia, St. Louis
Reiches, Aaron J., St. Louis
Reid, James A., Marshall
Reider, Richard A., Warson Woods
Reilly, Pierce J., St. Louis
Reimer, Donald R., Cape Girardeau
Reineck, John A., St. Louis
Reinhard, Edward H., St. Louis
Reinhardt, George R., Kansas City
Reisa, Ronald C., St. Charles
Reiss, Jeanne E. L., Kansas City
Reister, Dorothy D., Shawnee Mission, Kan.
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Reister, Philip D., Kansas City

Reitman, Stanley, St. Louis
 Rejent, Anthony J., St. Louis
 Remark, Frederick L., St. Louis
 Rendleman, David D., St. Louis
 Rendleman, George F., St. Louis
 Rendleman, George, Jr., St. Louis
 Rennard, Marvin, St. Louis
 Repp, Theodore J., St. Louis
 Reuter, Louis A., St. Louis
 Revare, Paul, Kansas City
 Reyes, Jose T., St. Louis
 Reyes, Luis A., St. Louis
 Reyes, Rosendo A., St. Louis
 Reynolds, Clarence C., Kansas City
 Reynolds, Fred, St. Louis
 Reynolds, Garland A., Cape Girardeau
 Reynolds, M. Wayne, Warrensburg
 Rhee, Young Wung, St. Louis
 Rhoades, Arthur B., Lenexa, Kan.
 (Member Jackson County Medical Society)
 Rhodes, Euhlan L., Warsaw
 Rice, Carl E., Hillsboro
 Rice, Earl R., Fort Lauderdale, Fla.
 (Member St. Louis Medical Society)
 Rice, Ronald, St. Charles
 Richany, Shafik F., Kansas City
 Richards, Frank O., St. Louis
 Richardson, George A., Union
 Richardson, Marion W., Kansas City
 Richardson, Thomas F., St. Louis
 Richardson, William D., Ghana, W. Africa
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 Richardson, William R., Union
 Richman, Elmer, Chesterfield
 Richmond, Michael R., Florissant
 Richter, William B., Stockton
 Riddell, Richard V., St. Joseph
 Ridenhour, C. E. Gene, Columbia
 Ridgeway, William G., St. Louis
 Ridings, Harold D., Cape Girardeau
 Ridzon, Thomas J., St. Charles
 Riekhof, Paul L., Kansas City
 Ries, Douglas A., St. Louis
 Riffel, Gordon W., Bourbon
 Rifkin, Shale M., St. Louis
 Riggio, Salvatore N., St. Louis
 Rigney, Levi M., Springfield
 Rikli, Arthur E., Columbia
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 Rinck, Edward C., Nevada
 Rinck, William E., Kansas City
 Ring, Edward M., St. Louis
 Rink, Richard A., Columbia
 Rinker, Carl T., Jr., Springfield
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 Ritchie, Frances R., St. Louis
 Ritter, C. John, Cape Girardeau
 Ritter, Hubert A., St. Louis
 Ritter, Paul J., St. Louis
 Ritter, Raymond A., Cape Girardeau
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 Ritterbusch, James K., Fulton
 Rizzo, Adolfo E., St. Louis
 Roach, Edward A., St. Charles
 Roark, Glenn E., Austin, Texas
 (Member Boone County Medical Society)
 Robb, Harold Phillip, Jefferson City
 Robben, G. Garry, St. Louis
 Roberts, Grosvenor G., Kansas City
 Roberts, Harold K., Clayton
 Roberts, Harold M., Kansas City
 Roberts, Howard H., Joplin
 Roberts, John P., Kirkwood
 Roberts, John R., St. Louis
 Roberts, L. Marvin, Kansas City
 Roberts, Paul A., Sweet Springs
 Roberts, Phyllis Grant, St. Joseph
 Robertson, Frank G., St. Louis
 Robertson, William D., Poplar Bluff
 Robertson, William D., Kansas City
 Robichaux, Eugene B., Excelsior Springs
 Robnett, Wade V., Kansas City
 Robins, Eli, St. Louis
 Robinson, Arthur W., Kansas City
 Robinson, Edith C., St. Louis
 Robinson, E. Kip, Kansas City
 Robinson, Gary Lewis, Springfield
 Robinson, George C., Humansville
 Robinson, G. Wilse, Jr., Kansas City
 Robinson, John A., Edgerton
 Robinson, Van M., Kansas City
 Robinson, William J., Kansas City
 Robison, James T., Jr., Kansas City
 Roblee, Melvin A., St. Louis
 Roche, Maurice B., St. Louis
 Rockoff, S. David, Washington, D. C.
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 Rodriguez, Luis M., St. Louis
 Rodriguez, Rolando A., Kansas City
 Rodriguez, Ubaldo R., St. Louis
 Roehrs, Marvin E., Marshall
 Rogers, Cyril H., St. Louis
 Rogers, Hunter Bryan, St. Louis
 Rogers, John A., St. Louis
 Rogers, John T., St. Joseph
 Rogers, Robert L., Kansas City
 Rohlfing, Edwin H., St. Louis
 Rohlfing, Walter H., St. Louis
 Roller, Merrill J., Hannibal
 Rollins, Harry D., Winona
 Romero, Richard N., Crystal City
 Ronald, Douglas C., Butler
 Roos, Albert, St. Louis
 Roper, Charles L., St. Louis
 Roper, Stanley D., Ozark
 Rose, Charles V., Kansas City
 Rose, Dalton K., St. Louis
 Roscan, Marvin, St. Louis
 *Rosell, Louis V., St. Louis
 Rosen, Max, Springfield
 Rosenbaum, Harry D., St. Louis
 Rosenbaum, Herbert E., St. Louis
 Rosenfeld, Henry, St. Louis
 Rosenholtz, Mitchell J., Columbia
 Rosenthal, Irwin I., St. Joseph
 Rosenthal, Ronald E., St. Louis
 Ross, Gilbert, Jr., Columbia
 Rost, William B., St. Joseph
 Roter, Alexander M., St. Charles
 Roth, Alfred D., Kansas City
 Roth, John J., St. Louis
 Rother, Paul H., St. Charles
 Rothman, David, St. Louis
 Rothweiler, Robert J., St. Louis
 Roufa, Joseph F., St. Louis
 Roulhac, George E., St. Louis
 Rouse, Ernest T., St. Louis
 Roxas, Generoso P., St. Louis
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 Rufe, John R., Kansas City
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 Ruhling, Rudy, St. Louis
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 Russell, Garth, Columbia
 Russell, Herman E., Berkeley
 Russell, James L., Kansas City
 Russell, Joseph P., Jefferson City
 Russell, Robert K., Raytown
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 Rutledge, William J., Campbell
 Rutman, Joel, St. Louis
 Ryan, John B., Washington
 Ryan, John H., St. Joseph
 Ryan, John J., Clayton
 Ryan, Robert E., St. Louis
 Ryan, Thomas J., Jefferson City

S

St. John, Thomas C., St. Louis
 Sabates, Felix N., Kansas City
 Sabat, Abdollah A., St. Charles
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 Saferstein, Lester, Kansas City
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 Sandow, Theodore, Jr., Kansas City
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 Sargent, John P., Sikeston
 Sasano, Joseph R., Jr., Kansas City
 Sasser, William F., St. Louis
 Sato, George, St. Louis
 Sauer, Donald C., St. Louis
 Sauer, Gordon C., Kansas City
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 Sawyer, Floyd E., Kansas City
 Sawyer, James, St. Louis
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 Schaefer, George J., St. Louis
 Schaefer, Glenn S., Jr., St. Louis
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 Schaefer, Jacques P., St. Louis
 Schaeffer, William C., Kansas City
 Schaper, Ernest H., St. Louis
 Schattyn, Martyn, St. Louis
 Schechter, Samuel E., St. Louis
 Scheele, Paul M., St. Louis
 Scheer, George E., St. Louis
 Scheff, Harold, St. Louis
 Scheibe, Robert C., St. Louis
 Schengber, John S., St. Louis
 Schertz, Truman B., N. Kansas City
 Scheuber, Charles, Columbia
 Schewe, Elmer J., Jr., Columbia
 Schierman, William D., St. Louis
 Schiffmacher, Jack E., Kansas City
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 Schlenker, Lawrence, St. Louis
 Schluer, Elmer P., St. Louis
 Schmidt, C. Robert, Kansas City
 Schmidt, Charles A., Gerald
 Schmidt, Dennis A., St. Louis
 Schmidt, Edwin H., St. Louis
 Schmidt, Edmund M., St. Louis
 Schmidt, Herbert J., Joplin
 Schmidt, J. H., Jefferson City
 Schmiemeier, Roy H., St. Louis
 Schneider, Sam, St. Louis
 Schneider, Thomas A., St. Charles
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 Schoeck, Albert F., St. Louis
 Schoedinger, George R., III, St. Louis
 Schoentag, John S., St. Louis
 Schoolman, Arnold, Kansas City
 Schopp, Alvin C., St. Louis
 Schottman, Gerhard W., Jr., Kansas City
 Schranck, Charles R., St. Louis
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 Schuessler, Wolfgang P., St. Louis
 Schuetz, Alfred, St. Charles
 Schulte, Gregory A., Joplin
 Schultz, E. Robert, St. Louis
 Schultz, Irwin, St. Louis
 Schultz, Loraine E., Branson
 Schultz, Robert V., Liberty
 Schultz, Samuel, St. Louis
 Schutz, Carl B., San Marcos, Calif.
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 Schwartz, Frederick O., St. Louis
 Schwartz, Henry G., St. Louis
 Schwartz, Melvin M., St. Louis
 Schwartzman, Bernard, St. Louis
 Schwarz, Luis, Clayton
 Schweiss, John F., St. Louis
 Schweitzer, Fred C., Jr., Springfield
 Sciortino, Gaspare, St. Louis
 Sciortino, John S., St. Louis
 Scopelite, Joseph A., St. Louis
 Scorse, Sidney W., Joplin
 Scott, E. David, Jefferson City
 Scott, Elwin P., St. Louis
 Scott, Horace W., St. Louis
 Scott, Wendell G., St. Louis
 Seabaugh, Loy R., Cape Girardeau
 Seabaugh, Otis D., Webster Groves
 Seabaugh, William O. L., Cape Girardeau
 Seddon, John W., St. Louis
 See, William B., Columbia
 Seely, James J., St. Louis
 Seely, Clark W., Kansas City

Seever, Ruth, Osceola
Seib, George A., St. Louis
Seiden, Gerald D., Kansas City
Sells, Kenneth J., Kansas City
Senhauser, Donald A., Columbia
Senn, Emmett J., Herculaneum
Senne, Herbert C., St. Joseph
Sennott, John S., Jefferson City
Senor, Samuel E., St. Joseph
Senturia, Ben H., St. Louis
Senturia, Hyman R., St. Louis
Sertl, John D., St. Louis
Sessions, Donald G., St. Louis
Sevastianos, Aristides E., St. Louis
Sevin, Omar R., Rockhall, Md.
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Sexton, Elmer E., St. Louis
Shackelford, Horace H., St. Louis
Shackter, Bruce I., Springfield
Shah, Anwar, St. Louis
Shahan, Philip T., St. Louis
Shalet, Malcolm F., Kansas City
Shanahan, Mary Patricia, Joplin
Shanahan, Phil J., St. Louis
Shane, Ramon A., Springfield
Shaner, John F., St. Louis
Shank, Robert E., St. Louis
Shapiro, Herbert N., St. Louis
Shapiro, Lazare M., Kansas City
Shapleigh, John B., St. Louis
Sharp, Austin R., St. Louis
Shatz, Burton A., St. Louis
Shaw, Edward J., St. Louis
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Shelden, Russell D., Kansas City
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Shelton, Edward O., Eldon
Shen, Jerome T. Y., St. Louis
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Sheridan, Edmund R., St. Louis
Sherwin, Charles S., St. Louis
Shevlin, Charles F., St. Joseph
Shieber, William, St. Louis
Shields, J. B., St. Louis
Shiffrin, Alexander, Kansas City
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Shirey, Arnold G., Hayti
Shively, John A., Columbia
Shobe, Frank O., St. Louis
Shockley, Clarence J., Kansas City
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Shuey, Herbert H., Kansas City
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Siesener, Herbert H., St. Louis
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Signorelli, Andrew J., St. Louis
Silberman, Henry K., Columbia
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Silsby, Harry D., Springfield
Silver, Bernd, St. Louis

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Silvermintz, Saul D., Ladue
Simmons, Donald D., Kansas City
Simmons, Earl M., Jr., Columbia
Simmons, Jess S., Jr., Columbia
Simmons, John L., St. Louis
Simms, Otho M., St. Charles
Simon, David L., St. Louis
Simon, Jerome I., St. Louis
Simon, Nathan M., Clayton
Simon, Sanford, Kansas City
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Simpson, Albert P., Springfield
Simpson, Emerson L., Springfield
Simrill, Wayne A., St. Louis

Sims, William A., Jr., St. Louis
Sinchai, Pravit, St. Louis
Sincow, Charles H., Platte City
Singleton, Chas. M., II, Kansas City
Singleton, John M., III, Kansas City
Sirridge, Marjorie S., Kansas City
Sirridge, William T., Kansas City
Sisk, James C., St. Louis
Sisler, Maynard Lee, Kennett
Sisson, Richard G., St. Louis
Siu, Kenneth K. C., Jefferson City
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Slentz, Edwin L., Kansas City
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Slickman, Robert A., Kansas City
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Smiley, William, St. Louis
Smit, Herbert M., St. Louis
Smith, Arthur B., Kansas City
Smith, Benjamin F., Jr., St. Louis
Smith, C. Franklin, Willow Springs
Smith, C. Souther, Springfield
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Smith, Dermott, St. Louis
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Smith, George E., St. Louis
Smith, Herbert P., St. Louis
Smith, Hubert E., Kansas City
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Smith, Ira T., Kansas City
Smith, J. Earl, St. Louis
Smith, James M., Kansas City
Smith, James O., Clinton
Smith, Jason N., Jr., Columbia
Smith, Joe R., Columbia
Smith, John R., St. Louis
Smith, Katherine W., Kansas City
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Smith, Kenneth R., Jr., St. Louis
Smith, Morton E., St. Louis
Smith, Norris W., St. Louis
Smith, Othello D., Prairie Village, Kan.
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Smith, Roland T., Joplin
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Smith, Sidney E., St. Louis
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Smith, Wallace B., Independence
Smith, William J., Windsor
Smith, W. Russell, Carthage
Smolik, Edmund A., St. Louis
Smoller, Martin B., St. Charles
Smull, Ned W., Kansas City
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Sneid, Philip, Kansas City
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Solomon, Felix G., St. Louis
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Sommer, Conrad S., St. Louis
Sommer, Ross B., St. Louis
Somoza, Jose, Kansas City
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Sorenson, George D., St. Louis
Sosebee, Lee A., Columbia
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Soto, Alberto A., St. Louis
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Spalding, Donald G., St. Louis
Spalding, Wilber B., Plattsburg
Spalding, Wilber B., Jr., Kansas City
Sparkman, Thomas C., Cape Girardeau
Spears, Charles A., Branson
Spears, Joe L., Cabool
Spector, Gene W., St. Louis
Speer, David L., Creve Coeur
Spencer, Donald M., Kansas City
Speno, Angelo A., St. Louis
Spies, Barbara J., Kansas City
Spinzig, Edgar W., Kirkwood
Spitz, Milton A., Chicago, Ill.
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Spitz, Richard H., St. Louis
Spooneman, Marlin C., St. Louis

Spoonemann, Walter H., St. Louis
Sportsman, Weldon L., Smithville
Spratt, John S., Jr., Columbia
Spurgeon, Milo J., Columbia
Spurney, Joe E., Kansas City
Spurny, Otto M., Kansas City
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Stacey, Wallace R., Independence
Stacy, Winton T., St. Joseph
Staehle, Melvin E., St. Louis
Stafford, Walter R., St. Louis
Staggs, William A., Kansas City
Staley, Harry R., Kansas City
Stallard, Donald J., St. Joseph
Stanfield, Ned M., Jr., St. Louis
Stansbrough, Raymond A., Normandy
Staple, Tom W., St. Louis
Starkloff, Gene B., St. Louis
Starkloff, Max, St. Louis
Statland, Harry, Kansas City
Statland, Morris, Kansas City
Staton, R. Hamilton, Carrollton
Staufacher, C. Gordon, Sedalia
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Steele, Jack T., St. Louis
Steele, James C., Jr., Hannibal
Steffen, Lawrence F., Kansas City
Stegman, Elmer G., Raytown
Steig, Arthur H., Jr., St. Louis
Stein, Harry J., St. Louis
Stein, Joseph W., Kansas City
Stein, Leonard P., St. Louis
Steinbeck, Herbert D., Ridgefield, Conn.
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Steinberg, Lawrence S., St. Louis
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Stephens, Jack D., Kansas City
Stephens, LeRoy J., St. Louis
Stephens, William A., St. Louis
Stephenson, Hugh E., Jr., Columbia
Stergen, Nick E., Florissant
Sterkel, Richard L., St. Louis
Sterling, John A., Kirkwood
Stevens, Edward M., St. Joseph
Stevens, Robert W., St. Louis
Stewart, Frances H., St. Louis
Stewart, John W., St. Louis
Stewart, Mark A., St. Louis
Stewart, Robert B., Springfield
Stewart, Robert H., Sedalia
Stewart, Wellington B., Columbia
Stewart, R. Wendell, Springfield
Stewart, Wendell K., Cape Girardeau
Stewart, William J., Columbia
Stickle, Arthur W., St. Louis
Stickler, Ralph O., Kirksville
Stindel, Charles E., St. Louis
Stockton, Raymond W., Kansas City
Stockwell, A. Lloyd, Kansas City
Stockwood, Robert C., Sedalia
Stohr, Paul E., St. Louis
Stokes, James M., St. Louis
Stolar, Jacob, St. Louis
Stoneman, William, III, St. Louis
Stotts, Charles S., Fredonia, Kan.
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Stoy, Robert P., Columbia
Strader, Richard P., St. Louis
Stratemeier, Edward H., Kansas City
Stratman, Clarence A., N. Kansas City
Strauchen, Gilbert W., Key Largo, Fla.
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Strauss, Carl F., Kansas City
Streetor, Roderick D., St. Louis
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Stribling, Thomas L., Independence
Stricker, Emil A., St. James
Stricker, Harold C., Jefferson City
Strobach, Kurt F., St. Louis
Strobach, Robert L., Butler
Strominger, Donald B., St. Louis
Stroud, Malcolm H., St. Louis
Stryker, Garold V., Venice, Fla.
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Stryker, William I., Ladue
Stuart, Byron M., Boonville
Stuart, Daniel D., Brunswick
Stuart, Wallace, Eureka

* Doctor of Osteopathy.

Stuebner, Roland W., Goodland, Fla.
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Stuffleham, Robert E., Springfield
Sturtevant, Harwood N., Springfield
Stutsman, Albert C., St. Louis
Suba, Antonio R., St. Louis
Suddarth, Sterling B., Kansas City
Sudholt, Alfred F., Jr., St. Ann
Sueper, Robert H., St. Louis
Sugarbaker, Everett D., Jefferson City
Sulit, Arnulfo P., Kansas City
Sullivan, Clement J., St. Louis
Sullivan, Leo R., St. Louis
Sullivan, Wm. Wallace, Kirkwood
Sulzbach, John F., Columbia
Summers, Caldwell B., Kansas City
Summers, John B., St. Louis
Summers, Joseph S., Jr., Jefferson City
Summers, Thomas F., St. Louis
Sunderman, Raymond C., St. Louis
Sundstrom, Frank D., Springfield
Sunshine, Herbert, St. Louis
Susanka, William D., St. Louis
Susman, Irvin C., St. Louis
Susman, Noah, St. Louis
Sutter, Richard A., St. Louis
Sutton, Richard L., Jr., Kansas City
Swaykus, Bernard T., St. Ann
Sweany, Henry C., Columbia
Sweeney, Thomas P., Springfield
Sweet, Herbert C., Webster Groves
Sweiger, James H., Plattsburg
Swidnicki, Leonid, Hannibal
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Sword, Richard O., Kansas City
Sydow, Henry A., Fulton
Szabados, Ernest D., Independence
Szymanski, Stanley R., Macon

T

Talaban, Raymundo D., St. Louis
Talbert, Clifford R., Jr., Cape Girardeau
Tamayo, Primo R., Ballwin
Tamblyn, Claire L., Kansas City
Tanaka, George M., St. Louis
Tanner, Robert H., Jefferson City
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Tapper, Stephen M., St. Louis
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Tarsan, Solomon S., Overland Park, Kan.
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Tasker, Charles B., Kansas City
Tassi, Albert A., St. Charles
Tatkow, Robert W., St. Louis
Tatum, John Henry, Poplar Bluff
Taussig, Barrett L., St. Louis
Taute, Herman, St. Louis
Taveras, Juan M., Boston, Mass.
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Taylor, Eugene T., St. Louis
Taylor, Helen L., St. Louis
Taylor, Herbert B., St. Louis
Taylor, Leo T., Neosho
Taylor, Leon A., Jefferson City
Taylor, Van W., Bonne Terre
Taylor, William E., Springfield
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Teiber, Frederick W., St. Louis
Teitelbaum, Steven L., St. Louis
Tellez, Edward R., Fulton
Temporal, Jose A., St. Louis
Tendai, Mark M., Columbia
Ternberg, Jessie L., St. Louis
Terrill, Robert S., Kansas City
Terry, James F., Springfield
Terry, James W., Jr., Cape Girardeau
Tess, Allen F., St. Louis
Tess, Melvin J. H., St. Louis
Tesson, James A., Kansas City
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Theel, Otto W., Jr., Kansas City
Thiel, J. Allen, St. Louis
Thiele, Belmont R., St. Louis
Thiele, George H., Kansas City
Thiele, Otto K., St. Charles
Thierauf, Charles G., St. Louis
Thies, Jerome H., Osceola
Thoma, George E., Jr., St. Louis
Thomas, Christopher Y., Kansas City
Thomas, Fred A., Columbia
Thomas, Horace E., Columbia
Thomas, Lewis J., Jr., St. Louis
Thomas, Robert M., Columbia
Thomas, Thomas C., Liberty
Thomasson, David D., Springfield
Thomasson, Robert E., St. Louis
Thompson, Charles L., Kansas City
Thompson, F. Gregg, III, St. Joseph
Thompson, Ian M., Columbia
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Throgmorton, Howard B., Sikeston
Thurman, Hill C., Parkville
Thurmann, Manfred, St. Louis
Thym, Henry P., Ballwin
Tibbs, William A., Jr., St. Louis
Tice, Wayne K., Independence
Tichenor, Robert W., St. Louis
Tietjen, Frederick O., Jefferson City
Tiffanv, D. E., Poplar Bluff
Till, Bennie N., Poplar Bluff
Tillema, David A., Kansas City
Tillman, Mary A. T., St. Louis
Tillman, Walter W., Jr., Springfield
Tindall, Robert N., St. Louis
Tinsley, John C., Jr., Columbia
Tiojanco, Milagros E., Kansas City
Tiongson, Porfirio M., St. Louis
Tippett, Jack C., St. Louis
Tjoflat, Oliver E., St. Louis
Tobias, Norman, St. Louis
Todd, Paul C., Marceline
Tombridge, Thomas L., Springfield
Tomlinson, William L., St. Louis
Tompson, Robert V., Moberly
Tonelli, George L., St. Louis
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Totten, Frederick E., Kansas City
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Tovar, Manuel, St. Joseph
Towers, Orville W., St. Charles
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Tremain, Irl G., St. Louis
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Trowbridge, Bernard C., Kansas City
Trowbridge, Ellsworth H., Jr., Kansas City
Trueblood, Alva C., Jr., St. Louis
Trugly, Edith S., St. Louis
Trunko, Leo, St. Louis
Tsang, John L. K., Springfield
Tsifutis, Argyrios, Brentwood
Tucker, Eugene F., St. Louis
Tucker, George L., St. Louis
Tull, Frank, Sikeston
Tuma, Arthur T., Poplar Bluff
Turner, C. M., St. Louis
Turner, Glenn O., Springfield
Turner, James H., Poplar Bluff
Turner, James K., St. Louis
Turner, Kirby L., Potosi
Turner, Ronald M., Independence
Turner, Rush, St. Louis
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Tuthill, Herbert, Kansas City
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Twedell, Donald L., St. Louis
Twin, Edward J., Kansas City
Twyman, Richard A., Kansas City
Tygett, Glenn J., Cape Girardeau
Tygett, Joseph N., Cape Girardeau

U

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Ulett, Pearl C., St. Louis
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Underwood, Johnson, Jr., Kansas City
Unger, Harold, Kansas City
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Upsher, Albert E., Kansas City
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Utley, James H., St. Louis
Utterman, William F., Perryville

V

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Vafi, Houshang, St. Charles

Vajaranant, Monit, Lexington
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Valins, Eugene, Kansas City
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Van Buskirk, William C., Kansas City
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Van Dyke, Elmer H., Sedalia
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Vatterott, Paul B., St. Louis
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Vaughan, Robert W., St. Louis
Vaughn, Arthur N., St. Louis
Vaughn, James W., Kansas City
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Veluz, Benito I., St. Louis
Vensel, Lee H., Springfield
Ventus, Manuel A., Hazelwood
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Viamontes, Jorge A., St. Louis
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Viers, Wayne A., St. Louis
Villadiego, Virgilio, St. Louis
Villahermosa, Juanito L., Savannah
Villarama, Antonio P., St. Louis
Vilmer, Charles, Kansas City
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Vinyard, Jack L., Joplin
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Votaw, Robert E., St. Louis
Voth, Harold W., Kansas City
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Waddle, Theodore L., Dexter
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Walker, Hugh B., Clinton
Walker, J. Leslie, St. Louis
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Walker, John W., Kansas City
Walker, Orville C., Jr., Independence
Walker, Paul W., Joplin
Walker, Willard B., Clayton
Walker, William M., Springfield
Wall, Harry C., Kansas City
Wall, Joe A., Houston
Wall, Leonard A., Kansas City
Wall, Lester E., St. Louis
Wallace, Edgar S., Mexico
Wallace, Hilen K., St. Joseph
Wallace, John K., II, Jefferson City
Wallwork, J. Caleb, Ballwin
Walsh, James W., St. Louis

Walter, Archie L., Sedalia
Walter, Kenneth E., St. Louis
Walter, William L., St. Louis
Walters, Harold E., St. Louis
Walters, Henry W., St. Louis
Walters, John H., Columbia
Walters, Laura, Columbia
Walters, William H., St. Louis
Walterscheid, John H., Hannibal
Walther, Roy A., Jr., St. Louis
Walton, Stephen, St. Louis
Walton, Franklin E., St. Louis
Waltrip, Roy T., Jr., Sikeston
Waltz, Charles A., Kansas City
Waltz, James R., Kansas City
Wanamaker, John M., Rock Port
Ward, Joe, Lexington
Ward, Robert L., Poplar Bluff
Warres, Herbert L., Springfield
Washburn, J. Loren, Versailles
Washington, Edward L., Columbia
Washington, Walter, St. Louis
Wasserman, Helman C., St. Louis
Waterfield, Jim R., Springfield
Waterman, Franklin M., Liberty
Waters, E. Burton, Defiance
Waters, Hugh R., St. Louis
Watkins, George L., Jr., Farmington
Watson, Cecil L., Marshall
Watson, Ethel, Independence
Watson, Trevor F., Columbia
Wattenberg, Carl A., St. Louis
Watts, Byron E., Jefferson City
Waxman, David, Kansas City
Waxman, Herbert J., Kansas City
Waxman, Jane Z., Kansas City
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Wayne, Sherwyn J., St. Louis
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Webb, Leslie R., Jr., Springfield
Webb, Marion A., St. Louis
Webb, Paul B., St. Louis
Webb, Paul B., Jr., St. Louis
Webb, Paul K., St. Louis
Webber, Wm. B., St. Louis
Weber, J. R., St. Louis
Weber, Sol, St. Louis
Wee, George C., St. Louis
Weed, Randal W., St. Joseph
Weeks, George R., Cape Girardeau
Weeks, Paul M., St. Louis
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Weiler, Thomas J., St. Louis
Weinand, Ernest E., St. Joseph
Weinhaus, Robert S., St. Louis
Weir, Don C., St. Louis
Weir, Robert K., Kansas City
Weir, Royal A., St. Louis
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Weisbrod, Wilfred B., St. Louis
Weisman, Renate D., St. Ann
Weisman, Sol, St. Louis
Weiss, James M. A., Columbia
Weiss, Stuart, St. Louis
Weldon, Clarence S., St. Louis
Well, Julius W., Palmyra
Weller, Lynn D., Kansas City
Wells, James A., Kansas City
Wells, John H., Kansas City
Welsh, Laurence C., St. Louis
Weltscheff, Christo A., Kansas City
Wempe, G. Raymond, Maryville
Wenneker, Alvin S., St. Louis
Wenner, Herbert A., Kansas City
Wentzel, Louis R., St. Louis
Werner, Dean F., N. Kansas City
Werner, Franklin C., Kansas City
Werner, William A., St. Louis
Wertzberger, John J., Kansas City
Wessler, Stanford, St. Louis
West, Joseph W., St. Louis
Westerfeld, Roy A., St. Charles
Westerman, Henry C., St. Louis
Westerman, Robert N., St. Louis
Westrup, Ellsworth A., Webster Groves
Westura, Edwin E., St. Louis
Weyerich, Leon F., St. Louis
Weyerich, Noel F., Chesterfield
Weygandt, Glenn R., St. Louis
Wheeler, Charles B., Kansas City
Wheeler, John H., Kansas City
Wheeler, Paul C., Columbia
Wheeler, Robert L., Harrisonville
Whitaker, Topsy H., East Prairie
White, Barry B., Poplar Bluff
White, Charles H., Kansas City
White, Eugene F., Rolla
White, George A., Kansas City
White, James S., Kansas City

White, Newton B., St. Louis
White, R. Ned., Springfield
White, Stoughton F., Kansas City
White, William E., Kansas City
White, William H., Jr., St. Louis
Whiteman, John R., Kansas City
Whitener, Miles C., St. Louis
Whitener, Paul R., St. Ann
Whitlock, C. Courtney, Springfield
Whitman, Doyle C., Kansas City
Whitmore, J. Stewart, Kansas City
Whitsell, Ora E., St. Joseph
Whittaker, Charles K., Kansas City
Whitten, Marion F., Carthage
Whittico, James M., St. Louis
Wicks, Edwin O., Kansas City
Wiedershine, Leonard J., St. Louis
Wiegand, Herbert C., St. Louis
Wieman, Harry K., Joplin
Wien, Irving A., Kansas City
Wiese, Harry W., St. Louis
Wiggins, Roland L., Columbia
Wilber, Robert D., Kansas City
Wilbers, Raymond H., Mexico
Wilcox, Ruth E., Joplin
Wilcoxon, William B., Bowling Green
Wiles, Jack N., West Plains
Wilhelm, Warren F., Kansas City
Wilkinson, Charles B., Kansas City
Wilkinson, Everett A., Kansas City
Will, Leo A., Venice, Fla.
(Member St. Louis Medical Society)
Williams, Carol F., St. Louis
Williams, Frank R., Kansas City
Williams, George P., Kansas City
Williams, Jerome, St. Louis
Williams, John M., Liberty
Williams, John W., Oak Grove
Williams, John W., Springfield
Williams, John W., Jr., Springfield
Williams, Joseph C., Jr., Kansas City
Williams, Ray D., St. Louis
Williams, Robert D., Kansas City
Williams, Robert S., Mexico
Williams, Roland D., Kansas City
Williams, Starks J., Kansas City
Williams, Thomas A., Kansas City
Williams, W. A., Jr., Cape Girardeau
Williamson, George L., Kansas City
Williamson, Walter E., St. Louis
Willits, Lyle G., Kansas City
Willman, Charles R., St. Joseph
Willman, Vallee L., St. Louis
Willoughby, James W., Kansas City
Willoughby, Jean B., Kansas City
Willumsen, Henry C., St. Joseph
*Wilson, A. W., St. Louis
Wilson, Alice H., Joplin
Wilson, Charles F., Cape Girardeau
Wilson, Clifford C., Kansas City
Wilson, Fred K., Winston
Wilson, George P., Columbia
Wilson, Hester J., Kansas City
Wilson, Hugh M., St. Louis
Wilson, John E., Columbia
Wilson, Keith S., St. Louis
Wilson, Lays C., Kennett
Wilson, Roy E., Springfield
Wilson, Vernon E., Rockville, Md.
(Member Boone County Medical Society)
Wilucki, Melvin R., St. Louis
Wimmer, Warren J., St. Louis
Windmiller, Myrl E., Columbia
Windsor, Charles E., St. Louis
Winegar, Alvon C., Jefferson City
Winer, Herbert J., Kansas City
Winer, Nathaniel, Kansas City
Winkelman, Esther B., Kansas City
Winn, George W., Boonville
Winokur, George, St. Louis
Winston, Bernard H., Kansas City
Winter, John H., St. Louis
Winter, Tyrus D., St. Louis
Winterer, Roland A., St. Louis
Winterling, Charles A., St. Louis
Winters, Kathleen, St. Louis
Wipfler, Earl J., Jr., St. Charles
Wirthlin, Edward H., St. Louis
Wise, George W., Kansas City
Wise, Gordon F., Springfield
Wise, Leslie, St. Louis
Wise, Morris F., Leawood, Kan.
(Member Jackson County Medical Society)
Wissmath, Frank S., Clayton
Wissner, Seth, St. Louis
Withers, Orval R., Kansas City
Withrow, John B., Kansas City
Witt, Clyde M., St. Louis
Witt, Frederick W., St. Louis
Wittgen, Edward M., St. Louis
Wittler, Harry A., St. Louis
Wittmer, Samuel C., Springfield
Wochner, R. Dean, St. Louis

Wolcott, Lester E., Columbia
Wolf, David I., St. Louis
Wolf, Jack W., Kansas City
Wolfe, Edward, St. Louis
Wolff, Harold D., St. Louis
Wolff, Paul G., Cape Girardeau
Wolff, Ray J., St. Ann
Wolfram, Edwin D., St. Louis
Wolfram, Philip H., Platte City
Wollschlaeger, Gertraud, Columbia
Wollschlaeger, Paul, Columbia
Womack, Granville J., Creve Coeur
Wommack, Fred L., Crane
Wong, George, Jr., Springfield
Wood, Bennett R., St. Louis
Wood, George F., Fulton
Wood, George H., Carthage
Wood, James A., Clayton
Wood, William W., Springfield
Woodman, Grey M., Kansas City
Woodruff, Calvin W., Columbia
Woodruff, Robert A., Jr., St. Louis
Woods, Harold V., Blue Springs
Woods, Ralph E., Clayton
Woods, S. Dwight, Kansas City
Woods, Walton C., Kansas City
Woodside, Kenneth T., St. Louis
Woodward, William W., Kansas City
Wool, Gerald, St. Louis
Wooldridge, Bart F., Joplin
Wooldridge, Wilfred E., Springfield
Woolf, Ralph B., St. Louis
Woolsey, Joyce E., St. Louis
Woolsey, Robert M., St. Louis
Word, Parker H., St. Louis
Workman, Charles E., Kansas City
Workman, George M., Hermann
Worley, Charles A., Sweet Springs
Wortmann, Robert F., Kansas City
Wotawa, William J., St. Louis
Wray, Rolla B., Nevada
Wright, Earl J., Kansas City
Wright, Robert P., Kansas City
Wu, William Q., Kansas City
Wulff, George J. L., Jr., St. Louis
Wurr, Dieter, Arnold
Wurster, Jerry B., Kansas City
Wurster, W. Joel, Kansas City
Wyatt, Lois C., Kirkwood
Wyrsh, Leo M., Jr., Springfield

Y

Yaeger, Gerald A., St. Charles
Yancey, Daniel L., Springfield
Yang, Jae H., St. Louis
Yannakakis, John E., Florissant
Yanow, Mitchell, St. Louis
Yap, Mardonio J. R., St. Louis
Yazdi, A. M., St. Louis
Ylagan, Amado, Jr., St. Louis
Yohe, Ruth M., Kansas City
Yore, Richard W., St. Louis
Yoskit, Harry, Festus
Youll, Donald V., Kansas City
Youmans, Ronald A., Kansas City
Young, Calvin C., Jr., Joplin
Young, James E., Kansas City
Young, Jesse W., Kansas City, Kansas
(Member Jackson County Medical Society)
Young, Paul R., Kansas City
Young, Robert B., Rolla
Young, Robert H., Moberly
Youngblood, James P., Kansas City
Younger, Walter A., St. Louis
Younger, Anita, St. Louis
Younger, Ernest, St. Louis
Yuan, Louis S. K., St. Louis

Z

Zacharias, David L., Kansas City
Zahn, Robert L., Springfield
Zahony, Ivan, Kansas City
Zahorsky, Theodore S., St. Louis
Zeffren, Joel L., St. Louis
Zeigler, Joseph M., Florissant
Zekert, Horst, St. Louis
Zellermayer, Jacob, Shawnee Mission, Kan.
(Member Jackson County Medical Society)
Ziegelmeyer, John S., St. Louis
Ziegler, Anthony, Jr., Vandalia
Zillgitt, George H., St. Louis
Zimmerman, Herbert B., St. Louis
Zimmerman, Joseph A., Kennett
Zingale, Frank G., St. Louis
Zink, Oscar C., St. Louis
Zografakis, George H., St. Louis
Zoller, David D., Kansas City
Zuckner, Jack, St. Louis
Zukowski, Edward T., Chesterfield
Zwart, Claude H., St. Louis
Zwirn, Benjamin H., St. Louis

* Doctor of Osteopathy.

Roster of Members by County Societies

(See Instructions on Page 519)

ADAIR COUNTY (North Central Counties Medical Society)

ANDREW COUNTY MEDICAL SOCIETY (Savannah 64485)

Baker, Warren C., Savannah
Kelley, Gilbert B., Savannah
Villahermosa, Juanito L., Savannah

ATCHISON COUNTY (Northwest Missouri Medical Society)

AUDRAIN COUNTY MEDICAL SOCIETY (Mexico 65265)

Boyce, John M., 620 E. Monroe St.
Bradley, William W., Box 47, Centralia 65240
Davis, Leonard L., Jr., 241 Geneva Rd., Knoxville, Tenn. 37919
Dwyer, Thomas L., 119 E. Love St.
Ector, Henry J., 314 S. Trinity St.
Ekern, H. Peter, 1415 S. Morris St.
Gantt, Ernest S., Jr., 1054 W. Monroe St.
Garcia, Charles L., Mexico
Godfrey, James J., 502 E. Monroe
Jolly, Benjamin N., 112 N. Clark Ave.
Jolly, William H., 112 N. Clark Ave.
Kallenbach, Glen P., 321 N. Washington St.
Lankford, Harold D., 117 E. Monroe St.
O'Brien, Harry F., Mexico
Rodes, Ned D., Mexico
Wallace, Edgar S., 210 E. Monroe St.
Wilbers, Raymond H., 113 E. Monroe
Williams, Robert S., Kemper Bldg.
Ziegler, Anthony, Jr., Vandalia 63382

BARRY COUNTY (Ozarks Medical Society)

BARTON COUNTY MEDICAL SOCIETY (Lamar 64759)

Arnold, Herbert M., Lamar
Bickel, Vern T., Lamar
Cain, Alvin R., Lamar
Carroll, Thomas W., Lamar
Gouldner, Edmond, 1103 Broadway, Lamar

BATES COUNTY (West Central Missouri Medical Society)

BOLLINGER COUNTY (Mineral Area Medical Society)

BOONE COUNTY MEDICAL SOCIETY (Columbia 65201)

Adams, Harold D., 213 W. Broadway
Allen, Joseph E., Professional Bldg.
Allen, Robert W., Rt. 2, St. Charles Rd.
Allen, William C., 508 W. Briarwood Lane
Almond, Carl H., 807 Stadium Rd.
Amlinger, Philipp R., 1118 W. Rollins Rd.
Anderson, Ivan A., 606 Medavista
Anderson, Philip C., 807 Stadium Rd.
Anderson, Thomas R., 822 Yale St.
Arnold, Richard C., P. O. Box 53
Asel, Norman D., 1502 E. Broadway
Baker, A. Sherwood, 807 Stadium Rd.
Baker, James M., 16 S. 10th St.
Battersby, Richard S., Candle Light Lodge
Bazzoui, Widad, 901 Colgate
Beene, Thomas K., 2806 W. Rollins Rd.
Bingham, Hal G., 807 Stadium Rd.
Black, Samuel P. W., 300 S. Glenwood St.
Blackwell, Charles W., 201 W. Broadway
Bonner, John T., 807 Stadium Rd.
Boylon, Teresita G., 1210 Haven Rd.
Brooke, Clement E., 901 Edgewood Ave.
Bruckardt, Diane, Student Health Service
Bruner, Claude R., 909 University Ave.
Buesseler, John A., Texas Tech. Univ. Sch. of Med., P. O. Box 4569, Lubbock, Texas 79409
Bumgarner, James E., 1504 E. Broadway
Bumgarner, Roger W., P. O. Box 975
Burns, Thomas W., 310 E. Brandon Rd.
Busby, William E., 113 W. Broadway
Byer, John A., 201 W. Broadway
Bynum, William R., P. O. Box 998
Cartwright, Robert S., 605 Hulen Dr.
Chalkley, Judson L., Boone County Hosp.
Chapman, Charles L., 1916 Ridgmont
Cheek, Charles W., 113 W. Broadway
Chiasson, E. Chaile, P. O. Box 1077
Cochran, Donald Q., 1502 E. Broadway
Colwill, Jack M., Countryside, R.F.D. 5

Cook, Galen B., 3169 Birdrock Rd., Pebble Beach, Calif. 93953
Cooper, Maurice E., 1000 Wayne Rd.
Cope, James C., 1502 E. Broadway
Crosby, Alice S., 2019 Crestridge Dr.
Culley, Thomas S., 807 Stadium Rd.
Darnell, Thomas F. B., Doctors Clinic Bldg.
Davis, David, 801 Crestland Ave.
Dawson, Richard, 807 Stadium Rd.
Denninghoff, James C., 201 W. Broadway
DeVee, Marion S., 807 Stadium Rd.
Dexheimer, Frank R., 113 W. Broadway
Dexter, James D., 807 Stadium Rd.
Donegan, Judith H., University of Missouri Medical Center
Donegan, William L., Ellis Fischel Cancer Hosp.
Eggers, George W. N., Jr., 807 Stadium Rd.
Ferneau, James E., 113 W. Broadway
Foote, Jerry E., 807 Stadium Rd.
Fuchs, George J., Jr., 1504 E. Broadway
Galeota, William R., 807 Stadium Rd.
Garb, Solomon, W. Colfax Ave., Spivak, Colo. 80214
Garrett, Glen H., 909 University Ave.
Garrotto, Lewis J., 807 Stadium Rd.
Gaunt, William D., 807 Stadium Rd.
Griffin, William T., 807 Stadium Rd.
Grimberg, Emile, 411 Bourn Ave.
Guthrie, Richard A., U. of Mo. Medical Center
Hall, David G., 807 Stadium Rd.
Hanna, Fikri M., 3333 Sage Ct., Mehlville 63129
Hardwicke, Henry M., Ashland 65010
Harris, Hugh S., Jr., 801 Cowan Dr.
Harris, Robert J., 2505 E. Broadway
Harrison, Winston E., 1220 Sunset Dr.
Hart, William M., 807 Stadium Rd.
Haw, Marvin T., Jr., 1807 Jackson
Hori, Jose M., Ellis Fischel State Cancer Hospital
Hubbell, Ira G., 302 McNab Dr.
Hueser, James N., 604 W. Broadway
Ide, Carl H., 600 Laurel Dr.
Jackson, Robert L., 807 Stadium Rd.
Johnson, Richard E., Boone County Hosp.
Jones, John B., Stone Hill, R.F.D. 1
Kays, Kenneth, 807 Stadium Rd.
Keown, Kenneth K., 807 Stadium Rd.
Kerr, S. Earl, 1308 Fieldcrest
King, Robert J., 1502 E. Broadway
Knutson, Carl O., Ellis Fischel State Cancer Hospital
Kubin, Milford T., Meadow Lark, R.F.D. 4
LaChance, Leopold, 110 W. Sneed, Centralia 65240
Ladenson, Roland P., 16 S. 10th St.
Landhuis, L. R., 113 W. Broadway
Lee, Yeu-Tsu, Ellis Fischel State Cancer Hospital
Leech, Charles A., 1504 E. Broadway
Leeper, Sidlee W., 1504 E. Broadway
Lewis, Ray B., 1502 E. Broadway
Lindberg, Donald, Route 4
Litwiller, R. W., 1312 W. Broadway
Lodwick, Gwilym S., 208 W. Ridgeley Rd.
Logue, John T., 1504 E. Broadway
Lohmar, Roland E., 113 W. Broadway
Longnecker, David E., 807 Stadium Rd.
Lukens, John N., Jr., U. of Mo. Medical Center
McCord, E. Scott, 807 Stadium Rd.
McElroy, Glenn L., 1504 E. Broadway
Marco, Philip J., 1015 College Park
Marienfeld, Carl J., 807 Stadium Rd.
Martin, Richard H., 807 Stadium Rd.
Mayer, William D., 1 Ridgeley Rd.
Metzgar, Marshall T., 807 Stadium Rd.
Miller, Leroy J., 1502 E. Broadway
Millikan, Larry E., 807 Stadium Rd.
Minnigerode, Lana, 807 Stadium Rd.
Minnigerode, Turner L., 4107 Defoe Dr.
Mitchell, Franklin L., 2208 Danforth Ct.
Mitchell, Lynn D., 1502 E. Broadway
Moranville, Benedict A., 1504 E. Broadway
Mosby, Larry D., 107 E. Brandon Rd.
Neal, M. Pinson, 807 Stadium Rd.
Nieuwenhuizen, Maarten, 803 Stadium Rd.
Nolph, Georgia B., 801 Westport Dr.
Orth, Oliver G., 201 W. Broadway
Overholser, Milton D., 807 Stadium Rd.
Payne, David E., 3005 Mexico Gravel
Payne, John W., 1504 E. Broadway
Pearman, Carl C., 2205 Country Lane
Perez-Mesa, Carlos, Ellis Fischel State Cancer Hosp.
Perez-Tamayo, Ruheri, Loyola University

Hospital, 2160 S. First Ave., Maywood, Ill. 60153
Pfefer, Leland U., 1504 E. Broadway
Pickard, Clarence M., 113 W. Broadway
Piepergerdes, Larry G., 313 E. Briarwood Ln.
Pingelton, William B., 113 W. Broadway
Politte, Lenard L., 113 W. Broadway
Pugh, Reginald P., Ellis Fischel Hospital
Rall, Kenneth L., 1121 Danforth Dr.
Reddin, Patrick C., 807 Stadium Rd.
Ridenhour, C. E. Gene, 1408 Pearl
Rikli, Arthur E., 4003 Faurot
Rink, Richard A., 807 Stadium Rd.
Rinker, Carl T., Jr., 2930 S. Glendale, Springfield 65804
Roark, Glenn E., Student Health Center, Box 7339, University Station, Austin, Tex. 78712
Rodgers, Elrie P., Box 993
Rosenholtz, Mitchell J., 807 Stadium Rd.
Ross, Gilbert, Jr., 807 Stadium Rd.
Russell, Garth, 1504 E. Broadway
Scheuber, Charles, 1504 E. Broadway
Schewe, Elmer J., Jr., 1232 Sunset Dr.
See, William B., 1504 E. Broadway
Senhauser, Donald A., 807 Stadium Rd.
Shively, John A., 807 Stadium Rd.
Sights, Warren P., Jr., 807 Stadium Rd.
Silberman, Henry K., Dept. of Psychiatry, University of Missouri Medical Center
Simmons, Earl M., Jr., 2216 Ridgefield Dr.
Simmons, Jess S., Jr., R.F.D. 7
Smith, Jason N., Jr., 701 West Blvd. S.
Smith, Joe R., 1506 E. Broadway
Somers, John E., 201 West Broadway
Sosebee, Lee A., 1504 E. Broadway
Spratt, John S., Jr., 105 S. Glenwood Ave.
Spurgeon, Milo J., 404 Edgewood Ave.
Stephenson, Hugh E., Jr., 807 Stadium Rd.
Stewart, Wellington B., Missouri Regional Medical, Lewis Hall
Stewart, William J., 909 University Ave.
Stoy, Robert P., 201 W. Broadway
Sulzbach, John F., 807 Stadium Rd.
Taylor, D. Dax, 923 College Park
Tenda, Mark, 807 Stadium Rd.
Thomas, Fred A., 807 Stadium Rd.
Thomas, Horace E., 1504 E. Broadway
Thomas, Robert M., 113 W. Broadway
Thompson, Ian M., 807 Stadium Rd.
Tinsley, John C., Jr., 16 S. Tenth St.
Turner, Thomas D., St. Luke's Hosp., Boise, Idaho 83702
VanPeenen, Hubert J., 807 Stadium Rd.
Waggoner, Charles M., 201 W. Broadway
Wakerlin, G. E., 406 Turner Ave.
Walters, John H., 11 S. Williams St.
Walters, Laura, 11 S. Williams St.
Washington, Edward L., 1504 E. Broadway
Watson, Trevor F., 1504 E. Broadway
Weiss, James M. A., 807 Stadium Rd.
Wheeler, Paul C., Univ. of Mo. Med. Center
Wiggins, Roland L., 408 N. Garth
Wilson, George P., 201 W. Broadway
Wilson, John E., 1504 E. Broadway
Wilson, Vernon E., Parklawn Bldg., 5600 Fishers Ln., Rockville, Md. 20852
Windmiller, Myrl E., 1504 E. Broadway
Wolcott, Lester E., 2417 Beachview Dr.
Wollschlaeger, Gertraud, 1718 E. Broadway
Wollschlaeger, Paul, 1718 E. Broadway
Woodruff, Calvin W., 807 Stadium Rd.

BUCHANAN COUNTY MEDICAL SOCIETY (St. Joseph)

Acuff, R. Philip, 702 Jule St. 64501
Ames, Mary B., 2318 Lovers La. 64503
Ames, William H., 902 Edmond St. 64501
Augustine, Robert W., 902 Edmond St. 64501
Bartulica, Nicholas, 3400 Frederick Ave. 64502
Beck, Paul M., Kirkpatrick Bldg. 64501
Beheler, Edward M., 2403 Frederick Ave. 64506
Benson, Scott C., 324 N. 6th St. 64501
Berney, Francis J., Kirkpatrick Bldg. 64501
Boteler, George M., 422 W. 47th St., Kansas City 64112
Bristow, Robert B., Physicians & Surgeons Bldg. 64501
Bryant, Sydney L., 902 Edmond St. 64501
Butler, Elza F., 902 Edmond St. 64501
Callman, George, State Hosp. No. 2 64502
Carpenter, George T., 902 Edmond St. 64501

* Doctor of Osteopathy.

Challener, William A., III, 902 Edmond 64501
Christ, Martin H., 6106 King Hill Ave. 64504
Cox, John P., 902 Edmond St. 64501
Craig, Owen W. D., Kirkpatrick Bldg. 64501
Craig, Richard O., 3900 Miller Rd. 64505
Day, Maxwell, 1507 Molona Ave., McAllen, Tex. 78501
Decanini, Mario, P. O. Box 263, 64502
DuMont, Clement C., 1905 Francis St. 64501
Ferguson, Luther J., 2907 Francis St. 64501
Fischer, Martin J., 902 Edmond, 64501
Fisher, Joseph L., 7th & Jule Sts. 64501
Forgave, Leon P., 1 Hundley Dr. 64506
Forman, George W., P.O. Box 830 64502
Fox, Gerald E., 5009 Briarwood 64506
Fuson, Levi H., Route 3 64506
Garrison, David L., 902 Edmond 64502
Gracia, Antonio J., 4702 Faraon 64506
Grant, Claude S., 1302 Faraon St. 64501
Greenberg, Charles, 10669 Rochester Ave., Los Angeles, Calif. 90024
Grimes, Manning E., Kirkpatrick Bldg. 64501
Gunter, Joe S., 902 Edmond St. 64501
Handler, Eric, Physicians and Surgeons Bldg. 64501
Harner, Casper G., 902 Edmond St. 64501
Hayes, Paul W., 902 Edmond St. 64501
Herman, Allen I., Physicians and Surgeons Bldg. 64501
Howden, Thomas L., 2723 Francis 64501
Hughes, Judson M., 3306 Jennifer La. 64506
Ide, Lucien W., P. O. Box 830 64502
Jimenez, Jose, 1004 Rush Road 64502
Kieber, Robert W., Kirkpatrick Bldg. 64501
Kline, Carolyn M., 17 Stonecrest St. 64506
Kline, Edmund W., 510 Francis St. 64501
Knepfer, Paul A., 902 Edmond St. 64501
Kulowski, Jacob, 2404 Highly St. 64506
Lee, Carleton H., 1402 Faraon St. 64501
Lehman, Philip C., 510 Francis St. 64501
McDaniel, John R., 902 Edmond St. 64501
McDonald, Wilbur P., 301 N. 8th St. 64501
Maginn, Richard L., 702 Jule St. 64501
Marsh, James M., Pioneer Bldg. 64501
Marston, F. James, Jr., 902 Edmond St. 64501
Martin, John N., Physicians and Surgeons Bldg. 64501
Minton, Robert S., Forest City 64451
Moen, Berwyn H., 902 Edmond St. 64501
Morse, John P., 902 Edmond St. 64501
Morse, Marvin, 2702 Faraon St. 64501
Mothershead, John L., 2603 Frederick Ave. 64501
Muench, Albert H., Physicians and Surgeons Bldg. 64501
Mullinax, Orr, Robidoux Motor Hotel 64501
Mundy, Homer F., State Hospital No. 2 64502
Ness, Carl K., 902 Edmond St. 64501
O'Brien, Liam, State Hospital No. 2 64502
O'Connor, William B., 510 Francis St. 64501
Pe, Romualdo L., V.A. Hospital, Danville, Ill. 61832
Petersen, Harold E., 2401 Frederick Ave. 64501
Pfeffer, Robert I., 1915 N. 29th St. 64506
Pifer, Lawrence H., 1302 Faraon St. 64501
Potter, Caryl A., Jr., Pioneer Bldg. 64501
Prokop, Joseph R., 902 Edmond St., 64501
Redmond, William, Corby Bldg. 64501
Riddell, Richard V., 902 Edmond St. 64501
Roberts, Phyllis Grant, 3314 Linda La. 64506
Rogers, John T., 2502 Ashland Ave. 64506
Rosenthal, Irwin I., State Hospital No. 2 64502
Rost, William B., 2221 N.W. Extension Blvd. 64506
Ryan, John H., 301 N. 8th St. 64501
Senne, Herbert C., 223 N. 7th St. 64501
Senor, Samuel E., 722½ Francis 64501
Shevlin, Charles F., 902 Edmond St. 64501
Sklenar, Donald E., 228 Illinois Ave. 64504
Stacy, Winton T., 1215 N. 24th St. 64506
Stallard, Donald J., 902 Edmond St. 64501
Stevens, Edward M., 702 Jule St. 64501
Thompson, F. Gregg, III, 902 Edmond St. 64501
Tovar, Manuel, 13th & Faraon St. 64501
Wadlow, Ernest E., 510 Francis St. 64501
Waggoner, Sharon E., 301 Illinois Ave. 64504
Wallace, Hilen K., 5th and Francis St. 64501

° Doctor of Osteopathy.

Weed, Randal W., 702 Jule St. 64501
Weinand, Ernest E., 902 Edmond St. 64501
Whitsell, Ora E., 802 N. 23rd St. 64506
Willman, Charles R., 2405 Frederick Ave. 64501
Willumsen, Henry C., 902 Edmond St. 64501

**BUTLER-WAYNE-RIPLEY COUNTY
MEDICAL SOCIETY
(Poplar Bluff 63901)**

Barbour, Marvin R., Kneibert Clinic
Bechtold, F. F., V.A. Hospital
Beecher, Sheldon B., 1517 Rosedale Ave.
Biggs, Fred J., Jr., Kneibert Clinic
Brookreson, Alton D., 1500 Luclyn
Brookreson, Alton F., 217 Oak St.
Caldwell, Fred, Kneibert Clinic
Camp, Richard V., Jr., 911 Lester
Canlas, Emilio M., P. O. Box 1009
Carlson, E. C., 623 Pine
Cline, Harold H., Piedmont 63957
Dinelli, Frank E., 215 Oak St.
Engelhardt, Robert C., Kneibert Clinic
Gernstetter, Sangwill L., P. O. Box 337
Hansbrough, Eugene T., 623 Pine Blvd.
Harwell, J. Lester, Plantation House, Apt. 104, 2400-44th St., Lubbock, Tex. 79412
Hecker, Joseph E., Kneibert Clinic
Hoya, W. Alexander, Kneibert Clinic
Kneibert, Fred L., Kneibert Clinic
Ladyman, George H., 623 Pine St.
Leroux, Gene, Doniphan 63935
Loughhead, John R., 330 N. 2nd St.
McLain, Bobby M., Route 2
McLane, Jerry F., 330 N. 2nd St.
McPheeters, James W., Sr., 330 N. 2nd St.
Macauley, Bernard J., 215 Oak St.
Markel, Arthur D., Kneibert Clinic
May, Albert L., Jr., 330 N. 2nd St.
Miller, David V., Kneibert Clinic
Parker, Arthur C., Jr., Kneibert Clinic
Plunkett, Littleton J., Jr., 330 N. 2nd
Romirez, Ricardo M., Kneibert Clinic
Raper, Charles A., 330 N. 2nd St.
Robertson, William D., Poplar Bluff
Ruff, T. Eugene, Kneibert Clinic
Tapp, Ernest M., 634 Pine Blvd.
Tatum, John Henry, 623 Pine Blvd.
Tiffany, Delbert E., RR #3, Box 36, Peaceful Acres
Till, Bennie N., 2030 Meadows
Tuma, Arthur T., 215 Oak St.
Turner, James H., 217 Oak St.
Turner, William F., 217 Oak St.
Ward, Robert L., 623 Pine
White, Barry B., 330 N. 2nd St.

**CALDWELL COUNTY
(Grand River Medical Society)**

**CALLAWAY COUNTY MEDICAL
SOCIETY
(Fulton 65251)**

Brown, John J., 101 E. 6th St.
Brown, Katherine S., 1304 Vine St.
Cremer, William J., State Hosp. No. 1
Crews, Robert N., 612 Court St.
Domke, Herbert R., 221 W. High, Jefferson City 65101
Durst, Henry, 610 Court St.
Gish, Rutledge, 5 E. 5th St.
Grove, George, 820 Jefferson St.
Hill, James E., 820 Jefferson St.
Jackson, Vernon B., State Hosp. No. 1
Osbourn, Richard A., 820B Jefferson
Peterson, Donald B., State Hosp. No. 1
Ritterbusch, James K., State Hosp. No. 1
Sydow, Henry A., 102 Saults Addition
Tellez, Edward R., 10 E. Reed
Tuttle, Jay F., State Hosp. No. 1
Wood, George F., 614 Market St.

CAMDEN COUNTY

Carnell, B. M., Camdenton 65020
(Member Mid-Missouri County Medical Society)
Garrison, T. W., Camdenton 65020
(Member Mid-Missouri County Medical Society)
Holley, Donald B., Camdenton 65020
(Member Mid-Missouri County Medical Society)
Wayland, Thomas A., Camdenton 65020
(Member Cole County Medical Society)

**CAPE GIRARDEAU COUNTY
MEDICAL SOCIETY
(Cape Girardeau 63701)**

Alyea, J. O., 937 Broadway
Ashley, Hugh V., P. O. Box 618
Ashley, Hugh V., Jr., P. O. Box 618
Bahn, Charles F., 1902 W. Broadway

Barnes, Seth S., 1854 Broadway
Blankenship, Dale M., 1930 Broadway
Burford, Edwin K., Jr., 937 Broadway
Campbell, Edward D., 937 Broadway
Chapman, Jean A., 1902 W. Broadway
Cochran, Jo R., 24 N. Sprigg St.
Cozean, Charles H., Jr., 937 Broadway
Crowe, John T., 937 Broadway
Dinkins, James A., 937 Broadway
Elrod, Dennis B., 211 N. Sprigg St.
Estes, Albert M., 714 Broadway
Herbert, Charles T., 824 Good Hope St.
Holcomb, John K., 24 N. Sprigg St.
Horn, Paul C., 1905 Broadway
Hoxworth, Gerald M., 210 Christine St.
Hunt, Robert S., 1834 Broadway
Jaeger, Joseph N., 208 S. High St., Jackson 63755

Johnson, Earl W., 937 Broadway
Johnson, Ernest D., 937 Broadway
Jung, J. Marshall, 101 E. El Cortez, R-4, Columbia 65201

Kasten, Melvin C., 1209 Sailer Circle
Keim, John H., 230 N. Sprigg St.
Kinder, James A., 937 Broadway
Kinder, Jerry L., 1834 Broadway
Kratz, Paul E., 2560 Gordonville Rd.
Lovinggood, Thomas A., 2505 Allendale
McDonald, Eugene F., 125 Court St., Jackson 63755

McGinty, Charles P., 1834 Broadway
Magaletta, George E., 937 Broadway
Nunnally, Gordon M., 1924 Broadway
Nussbaum, Paul B., 1858 Broadway
Oehler, William F., 213 N. Sprigg St.
Otto, Thomas G., 1912 Broadway
Parsons, D. LeRoy, 24 N. Sprigg St.
Rapp, Harold B., 1011 N. Henderson St.
Rawlins, Fred E., 1607 Berthing Ave.
Reimer, Donald Ross, 937 Broadway
Reynolds, Garland A., P. O. Box 817
Ridings, Harold D., 937 Broadway
Ritter, C. John, 1902 Broadway
Ritter, Raymond A., 1912 Broadway
Ritter, Raymond A., Jr., 1912 Broadway
Seabaugh, L. R., 219 N. Pacific St.
Seabaugh, William O. L., 24 N. Sprigg St.
Shoss, Milton, 937 Broadway
Sparkman, Thomas C., 601 N. Kingshighway
Stewart, Wendell K., 723 North Sunset
Talbert, Clifford R., 1902 Broadway
Terry, James W., Jr., 219 N. Pacific St.
Tygett, Glenn J., 215 N. Sprigg St.
Tygett, Joseph N., 1834 Broadway
Weeks, George R., 937 Broadway
Williams, W. A., Jr., 24 N. Sprigg St.
Wilson, Charles F., 714 Broadway
Wolff, Paul G., 1819 Broadway

**CARROLL COUNTY
(Grand River Medical Society)**

**CARTER-SHANNON COUNTY
MEDICAL SOCIETY**

Rollins, Harry D., Winona 65588

**CASS COUNTY
(West Central Missouri Medical Society)**

**CEDAR COUNTY
(West Central Missouri Medical Society)**

**CHARITON-MACON-MONROE-
RANDOLPH COUNTY MEDICAL
SOCIETY**

Arnold, Eugene L., 8338 Jennings Rd., Jennings 63136
Baker, Josephine D., Moberly 65270
Barnett, Floyd A., Paris 65275
Campbell, James E., Macon 63552
Chute, W. Deward, Moberly 65270
Cohrs, Clarence C., Moberly 65270
Collins, Gretchen D., Macon 63552
Dreyer, Philip V., Huntsville 65259
Eggleston, Donald E., Macon 63552
Fleming, J. Will, Jr., Moberly 65270
Fleming, Thomas S., Moberly 65270
Harms, Florian L., Salisbury 65281
Huber, Lasley E., Moberly 65270
Hudson, G. R., Moberly 65270
Miller, D. Herbert, 4410 Denison St., Muskogee, Okla. 74401
Ragsdale, George M., Paris 65275
Smith, Carl C., Moberly 65270
Streeter, Roderick D., 245 Union Blvd., St. Louis 63108
Stuart, Daniel D., Brunswick 65236
Tompson, Robert V., Moberly 65270
Young, Robert H., Moberly 65270

CHRISTIAN COUNTY
(Ozarks Medical Society)**CLARK COUNTY**
(Lewis-Clark-Scotland County
Medical Society)**CLAY COUNTY MEDICAL SOCIETY**

- Adams, Howard D., 114 N. Water St., Liberty 64068
Allain, James J., 2022 Swift St., N. Kansas City 64116
Allen, Louis A., 2800 Hospital Dr., N. Kansas City 64116
Armstrong, Jay H., 4812 Black Swan Dr., Shawnee Mission, Kan. 66216
Arst, Herbert E., 408 E. 68th St. N., Kansas City 64118
Balhuizen, John, 5601 N. Antioch Rd., Kansas City 64119
Banks, Frank R., Smithville Clinic, Smithville 64089
Bates, George C., 5140 Antioch Rd., Kansas City 64119
Boone, Daniel C., 5800 N. Grand Ave., Kansas City 64118
Bowles, Richard P., 112 N. Water St., Liberty 64068
Bruce, Paul C., 115 S. Titus Ave., Excelsior Springs 64024
Burke, Emmet K., 5140 Antioch Rd., Kansas City 64119
Castillo, Michael E., 2601 Kendallwood Pkwy., Kansas City 64119
Chiles, David R., Box 238, Smithville 64089
Cook, Jerry W., 7010 N. Cherry, Kansas City 64118
Cramer, Quentin, 8630 N. Oak Trafficway 64155
Deligeorges, John, 7010 N. Cherry, Kansas City 64118
Denton, Robert E., Smithville 64089
Dernoncourt, John E., Smithville 64089
Devine, Mark W., Jr., 5601 Antioch Rd., Kansas City 64119
Dunham, Robert H., 6022 N. Antioch Rd., Kansas City 64119
Edwards, Theodore F., 2029 Burlington St., Kansas City 64116
Fakhoury, Donald A., 4030 N. Oak St., Kansas City 64111
Fischer, Edward H., Suite 415, 2929 Baltimore Ave., Kansas City 64108
Fotopoulos, Chris K., 2022 Swift, North Kansas City 64116
Fowler, I. Charles, 2025 Swift S., N. Kansas City 64116
Galbol, Harley, 522 Elms Blvd., Excelsior Springs 64024
Gauer, Robert J., 525 N.W. 43rd Terr., Kansas City 64116
Glenn, Edward, III, 8630 N. Oak, Kansas City 64155
Haffner, Joel J., 6908 N.W. Overland Dr., Kansas City 64151
Haley, Ted M., 405 E. 19th Ave., N. Kansas City 64116
Hall, James W., 7010 N. Cherry, Kansas City 64118
Hayes, Lawrence L., 8400 N. Oak Trafficway, Kansas City 64155
Hedges, Richard C., 402 St. Louis Blvd., Excelsior Springs 64024
Hendren, Thomas H., 2022 Swift, Kansas City 64116
Hodge, Robert H., 2204 E. 39th St., N. Kansas City 64109
Houck, Russell M., V. A. Hospital, Kecoughtan, Va. 23367
Huddleston, Harvey T., Smithville Clinic, Smithville 64089
King, Phillip E., Westowne Place, Liberty 64068
Kirkland, Jerry A., 8630 N. Oak Trafficway, Kansas City 64155
Kuenzi, Donald E., 8630 N. Oak Trafficway, Kansas City 64155
Langhus, Melvin O., 104 W. Englewood Rd., N. Kansas City 64118
Littlejohn, Robert T., 2030 Swift, N. Kansas City 64116
McCormick, James E., 4030 N. Oak St., Kansas City 64111
McCracken, Samuel R., Box 220, Excelsior Springs 64024
McPhee, William R., 2800 Hospital Dr., Kansas City 64116
Mullins, Bernard L., 405 E. 19th St., N. Kansas City 64108
Mussgrave, David E., Excelsior Springs 64024
- Parker, Robert H., 5601 N. Antioch Rd., Kansas City 64119
Perico, Carlos J., 405 E. 19th Ave., Kansas City 64116
Perry, Lawrence L., Jr., 6300 N. Lenox St., Kansas City 64151
Pileggi, Felix A., 405 E. 19th St., N. Kansas City 64108
Porter, Russell C., 1351 Weeburn Rd., Seal Beach, Calif. 90740
Purcell, P. L., Smithville 64089
Raines, Oney C., III, 4124 Vivion Rd., Kansas City 64119
Reeder, Charles C., Smithville Clinic, Smithville 64089
Revare, Paul, 4100 Vivion Rd., Kansas City 64119
Richardson, William D., Baptist Medical Center, Nalerigu Via Gambaga, Ghana, W. Africa
Roberts, L. Marvin, 5140 Antioch Rd., Kansas City 64119
Robichaux, Eugene B., 116 South St., Excelsior Springs 64024
Robinson, Van M., 4124 Vivion Rd., Kansas City 64119
Sanders, George E., 116 South St., Excelsior Springs 64024
Sawyer, Floyd E., 5350 N. Oak St. Trafficway, Kansas City 64118
Schertz, Truman B., 2022 Swift St., N. Kansas City 64116
Schultz, Robert V., 1940-152 Highway, Liberty 64068
Slaughter, Carl R., 405 E. 19th Ave., N. Kansas City 64116
Somoza, Jose R., 2800 Hospital Dr., North Kansas City 64116
Soper, William D., 1236 N. Jesse James Rd., Excelsior Springs 64024
Sportsman, Weldon L., Rt. 2, Smithville 64089
Stratman, Clarence A., 1500 N.E. 57th Terr., Kansas City 64118
Thomas, Thomas C., Westowne Place, Liberty 64068
Triplett, Daniel A., 4124 Vivion Rd., Kansas City 64119
Vilmer, Charles, 2030 Swift, N. Kansas City 64116
Wald, Donald M., 2800 Hospital Dr., N. Kansas City 64116
Waterman, Franklin M., Liberty 64068
Werner, Dean F., 2025 Swift St., N. Kansas City 64116
Werner, Franklin C., 5140 Antioch Rd., Kansas City 64119
Williams, John M., 32 S. Main St., Liberty 64068
Williams, Robert D., 6700 Troost, Kansas City 64131
Williamson, G. L., 2030 Swift, N. Kansas City 64116
Withrow, John B., 5601 Antioch Rd., Kansas City 64119
Workman, Charles E., 2030 Swift, N. Kansas City 64116
Wright, Earl J., 4319 Claymont Dr., Kansas City 64116

CLINTON COUNTY MEDICAL SOCIETY

- Luckenbill, Paul T., Plattsburg 64477
Ozenberger, Larry A., Plattsburg 64477
Spalding, Wilber B., Plattsburg 64477
Sweiger, James H., Plattsburg 64477

COLE COUNTY MEDICAL SOCIETY
(Jefferson City 65101)

- Allan, James E., 2009 E. McCarty
Belden, Edgar A., 2124 Lowell
Bowe, Edwin Earl, 515 E. High
Bregant, Robert E., 515 E. High
Clark, Kendall A., 515 E. High St.
Cooper, Charles W., 423 Cherry St.
Courter, Larry P., 515 E. High
Cox, William A., 105 E. High St.
Doyle, Matthew J., 515 E. High St.
Enloe, L. David, 1200 Moreland
Exon, C. Stuart, 515 E. High St.
Files, James B., 515 E. High
Fullgrabe, E. A., State Office Bldg.
Garner, Lynn M., State Division of Health
Gentry, Merritt L., P. O. Box 263, Osage Beach 65065
Gordon, James S., 515 E. High St.
Guhleman, Henry V., Jr., 506 E. High
Gurnee, Landon H., 515 E. High St.
Handler, Fred P., 614 Boonville Rd.
Hauser, Robert J., 515 E. High St.
Kelly, Marshall W., 612 E. High St.
Klebb, Larry B., P. O. Box 403
Leslie, J. Paul, 933 Fairmount Blvd.

- Leslie, James T., Jr., 213 Jackson St.
Loyd, Earl L., Riviera Heights, Holts Summit 65043
McCaffree, Mary K., 903 Southwest Blvd.
McHaney, John W., 606 E. High St.
McKnelly, William V., 507 E. High St.
Mansur, Edward E., 519 S. Carolina Dr. Stuart, Fla. 33494
Matthews, John I., 302 Bolivar St.
Maxey, Hugh W., 1314 Elmerine
Meier, Francis X., 1913 Hayseleton Dr.
Meinershagen, Charles W., 111 Forest Hill
Morgan, Philip E., 226 E. Dunklin
Moseley, Otis O., Box 248, Osage Beach 65065
Ossman, Julian A., 2505 W. Main St.
Robb, Harold Phillip, 722 Jefferson
Russell, Joseph P., Division of Health
Ryan, Thomas J., 213 Jackson St.
Sanders, Jack S., 515 E. High St.
Schmidt, J. H., 515 E. High St.
Scott, E. David, 2009 E. McCarty
Sennott, John S., 515 E. High St.
Shull, G. Donald, 521 E. High St.
Siu, Kenneth K. C., 515 E. High St.
Stauffer, Harry B., 1312 W. High St.
Stricker, Harold C., 515 E. High St.
Sugabaker, Everett D., 503 E. High St.
Summers, Joseph S., Jr., 515 E. High St.
Tanner, Robert H., 1910 Greenberry Rd.
Taylor, Leon A., 1104 W. Main
Tietjen, Frederick O., 213 Jackson St.
Wallace, John K., II, 220 Ridgeway Dr.
Watts, Byron E., 515 E. High St.
Wayland, Thomas A., Box 239, Camdenton 65020
Winegar, Alvon C., 515 E. High St.

COOPER COUNTY MEDICAL SOCIETY
(Boonville 65233)

- Abele, William A., 329 Main St.
Avery, Willard B., 329 Main St.
Beckette, Theodore C., 317 Main St.
Chamberlain, Gilbert L., 570 E. Spring St.
Diekroeger, Manuel L., Route 1
Hata, Daikichi, 329 Main St.
Humphreys, Edward T., 329 Main St.
Stuart, Byron M., 329 Main St.
Winn, George W., 329 Main St.

CRAWFORD COUNTY
(Mid-Missouri County Medical Society)**DADE COUNTY**
(Dallas-Hickory-Polk-Dade Medical
Society)**DALLAS-HICKORY-POLK-DADE
COUNTY MEDICAL SOCIETY**

- Barnett, Charles H., Bolivar 65613
Bauer, Harold A., Lockwood 65682
Griffin, Evelyn, Buffalo 65622
Griffin, Olin A., Jr., Buffalo 65622
Harrell, Henry J., Rt. 1, Box 263B, Summerfield, Fla. 32691
Kahler, Monte R., Bolivar 65613
Koon, Ben H., Bolivar 65613
McCraw, Doyle C., Bolivar 65613
McNeel, Lee A., Jr., Greenfield 65661
Robinson, George G., Humansville 65674

DAVISS COUNTY
(Grand River Medical Society)**DEKALB COUNTY**
(Grand River Medical Society)**DENT COUNTY**
(Mid-Missouri County Medical Society)**DOUGLAS COUNTY**
(South Central Counties Medical Society)**DUNKLIN COUNTY MEDICAL
SOCIETY**

- Benson, Leo J., Jr., Kennett 63857
Cash, Charles R., Kennett 63857
Croon, Dorvyn W., Malden 63863
Dunmire, George Q., Kennett 63857
English, Wallace D., Cardwell 63829
Garrison, Norman A., Jr., 919 S. Jackson, Kennett 63857
Hopkins, Florian G., Gideon 63848
Hunt, John L., 2106 Jackson Rd., Poplar Bluff 63901
Legan, John K., Kennett 63857
Miltnerberger, Paul C., Kennett 63857
Morehead, William E., Malden 63863
Palenske, Robert L., Hornersville 63855
Peck, Chester R., Jr., Kennett 63857
Pu, Pin H., Kennett 63857
Rutledge, William J., Campbell 63933
Sisler, Maynard Lee, 215 Teaco Rd., Kennett 63857

* Doctor of Osteopathy.

Tarver, Quinton, Kennett 63857
Wilson, Loys C., Kennett 63857
Zimmerman, Joe A., Kennett 63857

**FRANKLIN-GASCONADE-WARREN
COUNTY MEDICAL SOCIETY**

Baker, Donald L., Union 63084
Bonney, Samuel C., Washington 63090
Bozzo, Raymond J., Washington 63090
Brenner, Paul A., Owensville 65066
Crawford, Robert M., Sullivan 63080
de la Torre, John J., Sullivan 63080
Denny, Hubert M., P. O. Box 387, Union 63084
Eisenmann, Benjamin P., New Haven 63068
Evermann, H. Walter, Warrenton 63383
Farrell, S. L., Washington 63090
Hoelscher, Harold F., Warrenton 63383
Jorel, Louis E., Hermann 65041
Mays, Frank G., Washington 63090
Mitchell, Thomas J., St. Clair 63077
Moellenhoff, Robert W., Washington 63090
Murney, Joseph A., Washington 63090
Post, John P., Washington 63090
Richardson, George A., Union 63084
Richardson, William R., Union 63084
Royse, Roy P., Sullivan 63080
Ryan, John B., Washington 63090
Schmidt, Charles A., Gerald 63037
Shea, James G., Gerald 63037
Steinbeck, Herbert D., Mamansco Rd., Ridgefield, Conn. 06877
Strehlman, Benjamin G., Union 63084
Workman, George M., Hermann 65041

**GASCONADE COUNTY
(Franklin-Gasconade-Warren County
Medical Society)**

**GENTRY COUNTY
(Northwest Missouri Medical Society)**

**GRAND RIVER MEDICAL SOCIETY
(Caldwell-Carroll-Livingston-Grundy-
Davies-Harrison-Linn-Mercer-DeKalb
Counties)**

Allen, Erroll W., Carrollton 64633
Atcheson, Windsor B., Trenton 64683
Bales, Eugene L., Carrollton 64633
Bohnsack, Ralph W., Brookfield 64628
Brennan, Raymond J., Chillicothe 64601
Broyles, Watkins A., Bethany 64424
Carter, Howard, Hamilton 64644
Cofer, T. N., 807 Stadium Rd., Columbia 65201
Conrad, Joseph, Chillicothe 64601
Cross, Albert D., Trenton 64683
Daley, Frank R., Hamilton 64644
Dixon, John R., Brookfield 64628
Dowell, Donald M., Chillicothe 64601
Dowell, J. Larry, Pattonsburg 64670
Duffy, Oliver F., Trenton 64683
Ellsworth, Willard, Cainsville 64632
Fair, William L., Chillicothe 64601
Fuson, William A., Trenton 64683
Gale, Joseph F., Chillicothe 64601
Gary, George, Marceline 64658
Gearhart, Merriam, Bethany 64424
Gilliland, Charles E., Cameron 64429
Howell, Billy D., Brookfield 64628
Kimberlin, Herbert C., Trenton 64683
McArator, Thomas R., Browning 64630
Magill, Joseph S., Milan 63556
Mandler, George, Chillicothe 64601
Nixon, Edward E., Gallatin 64640
Platz, John H., Carrollton 64633
Smith, Robert W., 321 S. Main, Brookfield 64628
Staton, R. Hamilton, Carrollton 64633
Szymanski, Stanley R., 329 N. Rollins, Macon 63552
Todd, Paul C., Marceline 64658
Vandiver, Virgil D., Chillicothe 64601
Vinyard, Jack L., St. John's Medical Center, 2777 McColland Blvd., Joplin 64801
Wilson, Fred K., Winston 64689

**GREENE COUNTY MEDICAL SOCIETY
(Springfield)**

Allan, James R., 3901 Hearnes, Apt. #2-11, Joplin 64801
Allen, Jerry H., 1211 S. Glenstone St., 65804
Allison, James B., 2200 E. Sunshine, Springfield 65804
Anthony, Dallas D., Professional Bldg. 65806
Ash, Charles J., Professional Bldg., 65806
Ashley, Thomas E., 1211 S. Glenstone St. 65804
Atkinson, Thomas E., Jr., 609 E. Cherry St. 65806

Auner, Cecil R., 600 S. Glenstone St. 65802
Back, Donald K., 1211 S. Glenstone St. 65804
Bailey, Alan B., 609 Cherry 65806
Baldwin, Richard, 600 S. Glenstone St. 65802
Barnhill, Floyd R., 600 S. Glenstone 65802
Beard, R. Wheatley, Professional Bldg. 65806
Bentley, John D., 419 Professional Bldg. 65806
Blades, Ross D., 1211 S. Glenstone St. 65804
Bonebrake, MacDonald, Professional Bldg. 65806
Boone, Martin H., Jr., Rt. 2, Box 315, 65802
Broadus, Loren, 1550 E. Sunshine 65804
Brown, David W., Professional Bldg. 65806
Brown, James T., 1653 S. National St. 65804
Brown, Lyman D., 604 Empire Bldg. 65806
Burkey, Jordan W., Professional Bldg. 65806
Burns, Thomas J., 2740 S. Glenstone 65804
Busiek, Erwin F., Professional Bldg. 65806
Busiek, Paul J., 1717 E. Grand 65804
Busiek, Urban J., Professional Bldg. 65806
Callaway, Guy D., 1155 S. Delaware St. 65804
Callaway, Guy D., Jr., 1211 S. Glenstone St. 65804
Carr, Phillip W., 1211 S. Glenstone 65804
Cheek, J. William, 609 Cherry 65806
Christy, Raymond A., Jr., 1211 S. Glenstone St. 65804
Clarke, Michael J., 609 Cherry 65806
Clary, William F., 1636 S. Glenstone St. 65804
Clawson, James W., Professional Bldg. 65806
Clayton, Edgar L., Professional Bldg. 65806
Cochran, Thomas E., Jr., 2423 Brentwood Blvd. 65804
Collier, Frederick C., 2433 Marlan St. 65802
Conrad, Raymond C., 609 Cherry St. 65806
Cook, James R., 2258 Barataria 65804
Cordonnier, James K., 1550 E. Sunshine 65804
Crawford, Oral B., Professional Bldg. 65806
Creighton, John C., Professional Bldg. 65806
Cunningham, Darral D., 1715 Boonville Ave. 65803
Dillard, Erin M., Professional Bldg. 65806
Dills, Joseph N., 1715 Boonville Ave., 65803
Dolan, Daniel L., Professional Bldg. 65806
Domann, Darrel D., Professional Bldg. 65806
Duncan, Robert D., 1534 E. Sunshine 65804
Elkins, Ronald F., 2830 E. Glenwood 65804
Ellis, Francis J., Professional Bldg. 65806
Ellis, Harry L., Professional Bldg. 65806
Emery, Frank E., 118 Professional Bldg., 65806
Evans, Ezra L., Jr., Apt. 1702, 833 E. Elm., 65806
Farthing, Gene W., 1636 S. Glenstone St. 65804
Ferguson, John L., 1550 E. Sunshine 65804
Ferguson, John P., Jr., 1219 S. Clay St. 65804
Ferrell, Thomas E., Jr., 1550 E. Sunshine Blvd. 65804
Fitch, C. H. Max, 1711 Boonville Ave. 65803
Fogerson, Virginia L., 1125 S. Karla 65804
Francis, William C., 600 S. Glenstone St. 65802
German, Walter A., Jr., 1211 S. Glenstone St. 65802
Giddings, Frank C., Burge Protestant Hosp. 65803
Giffin, James M., Professional Bldg., 65806
Glenn, Elmer E., 10639 Roundelay Circle, Sun City, Ariz. 85351
Glover, Jack F., 1550 E. Sunshine 65804
Glynn, Robert R., 1211 S. Glenstone St. 65802
Gorelick, David F., Professional Bldg. 65806
Gose, Don F., 1550 E. Sunshine 65804
Haen, Charles J., 1630 N. Jefferson 65803
Hall, David W., 2122 Wayland Dr. 65804
Hall, Durward G., 2442 S. Fremont 65804
Hanan, Ernest B., 724 E. Kingsbury 65804
Hanss, Armand W., 3500 Cherry 65804
Harmon, Ben C., 1211 S. Glenstone St. 65804
Harrison, Stratton W., Professional Bldg. 65806
Harvey, Harold D., 1531 E. Sunshine 65804
H'Doubler, Charles E., Professional Bldg. 65806
H'Doubler, Francis T., Jr., Professional Bldg. 65806
H'Doubler, Peter B., 609 Cherry St., Suite 114 65806

Herfkens, Kenneth D., 609 Cherry, 65806
Hills, Joseph E., 1550 E. Sunshine 65804
Hogeboom, George W., P. O. Box 1017, Delray Beach, Fla. 33444
Holland, Robert D., 1211 S. Glenstone 65804
Hollis, Richard W., Professional Bldg. 65806
Holmes, Daniel E., Route 9, Box 191 65804
Holmes, David R., 1636 S. Glenstone St. 65804
Hoover, H. Lee, Jr., 1330 E. Walnut St. 65802
Horton, James D., Professional Bldg. 65806
Hubbard, Sally L., 901 S. National 65802
Huewe, Douglas A., 609 Cherry 65806
Hulstra, Johannes F. W., 1211 S. Glenstone St. 65804
Ippensen, John H., 600 S. Glenstone 65802
Ivy, Henry B., 600 S. Glenstone St. 65802
Jameson, James E., Professional Bldg. 65806
Jobe, Charles L., Jr., 1211 S. Glenstone 65804
Johnson, George A., 229 Professional Bldg. 65806
Johnson, Noel M., 1211 S. Glenstone 65804
Johnson, Warford B., Professional Bldg. 65806
Johnson, William F., Professional Bldg. 65806
Johnston, Joseph L., 2855 Southern Hills Blvd. 65804
Jones, Harold L., 1550 E. Sunshine 65804
Key, James S., Professional Bldg. 65806
Klingner, George M., 1630 N. Jefferson St. 65803
Klingner, George M., Jr., 1630 N. Jefferson 65803
Knabb, Arthur D., 1630 N. Jefferson St. 65803
Knabb, Kenneth E., 1630 N. Jefferson St. 65803
Kolze, Vernon W., 600 S. Glenstone 65802
Langston, Walter R., Professional Bldg. 65806
Leagus, Charles J., Jr., 1211 S. Glenstone 65804
Leidinger, Karl J., Republic 65738
Lemmon, George B., Prof. Bldg. 65806
Lewis, Noel R., 1423 N. Jefferson Ave. 65803
Litton, Lyle D., Burge Protestant Hosp. 65803
Lockhart, Charles E., Professional Bldg. 65806
Loeb, Richard H., 1211 S. Glenstone 65804
Loren, Ernest, Professional Bldg. 65806
Lovett, Robert L., 1423 N. Jefferson 65802
Lowe, Horace A., Jr., 114 Professional Bldg. 65806
Lurie, Harold H., 600 S. Glenstone St. 65802
McAlhany, Howard J., 609 Cherry St. 65806
McKinsey, John J., Professional Bldg. 65806
Maddux, William P., Professional Bldg. 65806
Maher, Robert W., Professional Bldg. 65806
Mantell, Jack M., 1550 E. Sunshine 65804
Maple, Francis M., 1211 S. Glenstone St. 65804
Menchetti, Don E., 1630 N. Jefferson Ave. 65803
Michael, Harvey R., 1211 S. Glenstone 65804
Mill, Wm. B., Jr., 1423 N. Jefferson Ave. 65802
Milne, Jay L., 609 Cherry St. 65806
Morton, Paul C., 1508 E. Stanford 65804
Moseley, F. Thomas, 609 Cherry St. 65806
Napper, Marvin L., Professional Bldg. 65806
Neu, Leo T., Jr., 3008 Carlisle Circle 65804
Olson, Elbert R., 609 Cherry 65806
Overend, Don S., 1211 S. Glenstone St. 65804
Palcheff, Chris L., 1636 S. Glenstone St. 65804
Park, William I., Jr., Professional Bldg. 65806
Parlato, George S., 107 Professional Bldg. 65806
Penninger, William H., 600 S. Glenstone St. 65802
Peterson, Stanley S., 1211 S. Glenstone St. 65804
Podrecca, Guido I., Professional Bldg. 65806
Powell, Edwin M., Professional Bldg. 65806
Prater, Bill G., Professional Bldg. 65806
Pruett, Paul L., Professional Bldg. 65806
Quinn, Paul S., 1423 N. Jefferson 65802
Rainwater, Elmer H., Professional Bldg. 65806

Rigney, Levi M., 505 Woodruff Bldg. 65806
 Robinson, Gary L., 609 Cherry 65804
 Rosen, Max, 801 E. Cherry 65806
 Russell, Earl D., 1503 S. Glenstone St. 65804
 Sala, Jose M., 1423 N. Jefferson Ave. 65803
 Scanlon, Robert C., 1711 Boonville St. 65803
 Schaeffer, Edward M., 600 S. Glenstone St. 65802
 Schroff, Carle H., 1630 N. Jefferson Ave. 65803
 Schwartz, Eugene J., Professional Bldg. 65806
 Schweitzer, Fred C., Jr., Woodruff Bldg. 65806
 Shackter, Bruce I., 609 Cherry, Room 406, 65806
 Shane, Ramon A., 609 Cherry 65806
 Siciuff, Joseph G., 609 Cherry St. 65806
 Silsby, Don J., Professional Bldg. 65806
 Silsby, Harry D., Professional Bldg. 65806
 Simpson, Albert P., 318 St. Louis St. 65806
 Simpson, Emerson L., 1630 N. Jefferson Ave. 65803
 Smith, C. Souter, 1223 S. Kenwood 65804
 Sneed, William H., Jr., Professional Bldg. 65806
 Spalding, David L., Professional Bldg. 65806
 Stewart, Robert B., 600 S. Glenstone St. 65802
 Stewart, R. Wendell, Professional Bldg. 65806
 Stufflebam, Robert E., 2323 E. Rosebrier 65804
 Sturtevant, Harwood N., Professional Bldg. 65806
 Sundstrom, Frank D., 1211 S. Glenstone St. 65804
 Sweeney, Thomas P., Professional Bldg. 65806
 Tarrasch, Ernest L., 1636 S. Glenstone St. 65804
 Taylor, William E., Southwest Missouri State College 65802
 Terry, James F., 609 Cherry 65806
 Thomasson, David D., 600 S. Glenstone St. 65802
 Tillman, Walter W., Jr., Professional Bldg. 65806
 Tombridge, Thomas L., Professional Bldg. 65806
 Trotter, W. Yates, 1243 E. Catalpa 65804
 Tsang, John L. K., 1636 S. Glenstone St. 65804
 Turner, Glenn O., Professional Bldg. 65806
 Vensel, Lee H., 600 S. Glenstone St. 65802
 Waddell, Kenneth E., 1211 S. Glenstone St. 65804
 Wakeman, J. Newton, 600 S. Glenstone St. 65802
 Walker, William M., Professional Bldg. 65806
 Warren, Herbert L., 2614 Englewood Rd. 65804
 Waterfield, Jim R., 1211 S. Glenstone St. 65804
 Webb, Leslie R., Jr., 1243 E. Loren 65804
 White, R. Ned, Professional Bldg. 65806
 Whitlock, C. Courtney, Professional Bldg. 65806
 Williams, John W., 600 S. Glenstone St. 65802
 Williams, John W., Jr., 1227 Roanoke St. 65804
 Wilson, Roy E., 1211 S. Glenstone St. 65804
 Wise, Gordon F., Professional Bldg. 65806
 Wittmer, Samuel C., 600 S. Glenstone St. 65802
 Wong, George, Jr., 1636 S. Glenstone 65804
 Wood, William W., 2200 E. Sunshine 65804
 Woodbridge, Wilfred E., Professional Bldg. 65806
 Wyrsh, Leo M., Jr., 304 Professional Bldg. 65806
 Yancey, Daniel L., 1211 S. Glenstone St. 65804
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GRUNDY COUNTY
(Grand River Medical Society)

HARRISON COUNTY
(Grand River Medical Society)

HENRY COUNTY MEDICAL SOCIETY

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 Hollingsworth, Ray S., Clinton 64735
 Hughes, Shelby B., Clinton 64735
 Jones, Edna M., Clinton 64735

* Doctor of Osteopathy.

King, Richard H., Clinton 64735
 Smith, James O., Clinton 64735
 Smith, William J., Windsor 65360
 Walker, Hugh B., Clinton 64735

HICKORY COUNTY
(Dallas-Hickory-Polk-Dade County Medical Society)

HOLT COUNTY
(Northwest Missouri Medical Society)

HOWARD COUNTY MEDICAL SOCIETY

Bloom, W. A., Fayette 65248
 Dean, Francis D., Fayette 65248
 Leech, Maurice P., Fayette 65248
 Marshall, William G., Glasgow 65254
 Shaw, William J., Fayette 65248
 Shaw, William J., Jr., Fayette 65248

HOWELL COUNTY
(South Central Counties Medical Society)

IRON COUNTY
(Mineral Area County Medical Society)
JACKSON COUNTY MEDICAL SOCIETY
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 Allen, William B., 4320 Wornall Rd. 64111
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Cooper, Leo F., 6700 Troost 64131
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Cox, William L., 1465 Spruce Ave., Liberty 64068
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Elliott, Wade E., 710 W. 12th St. 64105
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Eubank, Dillard M., 9406 E. 63rd St. 64133
Eubank, William R., 6700 Troost 64131
Eubank, William Y., 6400 Prospect 64132
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Fee, Chester F., Suite 500, 2929 Baltimore 64108
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Frick, John P., 116 Huntington Rd. 64113
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Wilson, Hester J., Plaza Time Bldg. 64112
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Winer, Nathaniel, 4949 Rockhill Rd. 64110
Winkelman, Esther B., 6400 Prospect 64132
Winston, Bernard H., 601 E. 63rd St. 64110
Wise, George W., 1710 Independence Ave. 64106
Wise, Morris F., 2610 W. 105th, Leawood, Kan. 66206
Withers, Orval R., Plaza Parkway Bldg. 64112
Wolf, Jack W., 425 E. 63rd St. 64110
Woodman, Grey M., 2200 McCoy St. 64108
Woods, Harold V., 1405 W. 40 Hwy., Blue Springs 64015
Woods, S. Dwight, 4320 Wornall Rd. 64111
Woods, Walton C., Medical Dept. TWA, Midcontinent Intl. Airport 64153
Woodward, William W., 4240 Blue Ridge Blvd. 64133
Wortmann, Robert F., 6400 Prospect 64132
Wright, R. Paul, Professional Bldg. 64106
Wu, William Q., 6700 Troost 64131
Wurster, Jerry B., 4320 Wornall Rd. 64111
Wurster, W. Joel, 305 W. 43rd St. 64111
Yohe, Ruth M., 1710 Independence Ave. 64106
Youll, Donald V., 6700 Troost 64131
Youmans, Ronald A., 415 E. 63rd St. 64110
Young, James E., 716 Medical Plaza 64111
Young, Jesse W., 1401 Southwest Blvd., Kansas City, Kan. 66103
Young, Paul R., Meyer Blvd. at Prospect 64132
Youngblood, James P., 4620 Nichols Parkway 64112
Zacharias, David L., St. Joseph Hosp., Linwood Blvd. at Prospect 64128
Zahony, Ivan, Suite 350, 2929 Baltimore Ave. 64108
Zellermayer, Jacob, 5801 Lockton La., Shawnee Mission, Kan. 66205
Zoller, David D., 101 Memorial Dr. 64108

JASPER COUNTY MEDICAL SOCIETY (Joplin)

Adams, Robert B., Jr., Medical Arts Bldg. 64801
Allen, David O., 2525 S. Jackson 64803
Barnett, Norman H., 25th & Jackson 64803
Bentlage, Charles H., 25th & Jackson 64801
Birsner, Frank H., 1717 River, Carthage 64836
Bladow, Terrence C., Medical Arts Bldg. 64801
Burch, John E., Medical Arts Bldg. 64801
Butler, Patrick L., 219 Sergeant 64801

Carnes, Victor M., Medical Arts Bldg. 64801
Chase, Ned B., Jr., 114-B Medical Arts Bldg. 64801
Chesney, George W., 25th & Jackson 64803
Cohle, Richard R., Carthage 64836
Craig, Irwin T., P. O. Box 2275, 3209 McClelland 64801
Crawford, Archie L., Frisco Bldg. 64801
Crispell, Lawrence S. 6th & Pearl 64801
Davis, Charles S., 301 Medical Arts Bldg. 64801
DeTar, Burleigh E., 410 Jackson 64801
Eliseu, Juliette M., 2002 Jackson 64803
Esther, John R., Ferguson's Med. Laboratories 64801
Ferguson, Lewis H., Jr., 604 Plaza Dr. 64803
Ferguson, Ralph L., Medical Arts Bldg. 64801
Ferguson, Robert M., 2015 Jackson 64801
Fritsch, Andrew J., 2920 Pearl 64801
Gaston, Samuel Lee, 101 Medical Arts Bldg. 64801
Grubb, Paul H., 2509 Jackson 64803
Hall, Marvin F., Medical Arts Bldg. 64801
Hallaba, M. A. S., 25th & Jackson 64801
Hamilton, Eugene H., Medical Arts Bldg. 64801
Holtzman, Samuel, 3001 M. L. King Dr., Apt. 20, Chicago, Ill. 60016
Hurst, Wilfred W., Medical Arts Bldg. 64801
Isbell, Charles H., Carthage 64836
Jeans, Virgil, Medical Arts Bldg. 64801
Kirschman, Robert E., 2529 Jackson 64803
Koehler, John W., Medical Arts Bldg. 64801
Kuhn, John R., Jr., Frisco Bldg. 64801
Laney, Ronald L., P. O. Box 434, Carlsbad, Calif. 92008
Longenecker, Joe L., 2503 Jackson 64803
McKee, Howard B., 2509 Jackson 64803
McPike, Lloyd H., 2401 Jackson 64801
Mack, Mary L., (Address Unknown)
MacLaughlin, James C., Medical Arts Bldg. 64801
Maddox, John D., 6th & Pearl 64801
Martin, Clarence A., 2206 E. 10th 64801
Mueller, Adolph R., Jr., Medical Arts Bldg. 64801
O'Brien, James A., 2301 Texas, A-4. 64801
Paddock, Charles S., Medical Arts Bldg. 64801
Papp, Sandor D., Medical Arts Bldg. 64801
Patterson, Donald R., 2509 Jackson 64803
Patterson, Grover S., 510 S. Main, Carthage 64836
Pence, F. Wendell, 612 S. Main, Carthage 64836
Poor, Carl W., Rt. 1, Box 302, Neosho 64850
Post, Winfred L., 2401 Jackson 64801
Powell, Robert G., 2329 Jackson 64803
Roberts, Howard H., 3209 McClelland 64801
Rovee, James J., Sarcoxie 64862
Schmidt, Herbert J., 3209 McClelland, P. O. Box 2275, 64801
Schoeberl, Cletus B., Medical Arts Bldg. 64801
Schulte, Gregory A., 1255 Jackson 64803
Scorse, Sidney W., 619 W. 2nd 64801
Shanahan, Mary P., 2001 Sergeant Ave. 64801
Smith, Roland T., Medical Arts Bldg. 64801
Smith, W. Russell, 211 E. Chestnut, Carthage 64836
Vinson, Harold A., 107 Medical Arts Bldg. 64801
Walker, Paul W., Medical Arts Bldg. 64801
Whitten, M. Foster, 616 W. Centennial, Carthage 64836
Wieman, Harry K., Medical Arts Bldg. 64801
Wilcox, Ruth E., 614a Joplin 64801
Wilson, Alice H., 1923 Sergeant 64803
Wood, George H., 1515 Hazel, Carthage 64836
Wooldridge, Bart F., Medical Arts Bldg. 64801
Young, Calvin C., Jr., Medical Arts Bldg. 64801

JEFFERSON COUNTY MEDICAL SOCIETY

Allbee, Roger H., Crystal City 63019
Blank, Michael K., De Soto 63020
Carroll, Richard C., Crystal City 63019
Carron, Joseph F., Arnold 63010
Deles, Vincent D., Crystal City 63019
Donnell, Harold E., De Soto 63020
Donnell, Robert H., Crystal City 63019
Donnell, Thomas A., De Soto 63020

Edwards, Waldo B., 135 W. Adams Ave.,
Kirkwood 63122
Glasgow, David S., Crystal City 63019
Ibaviosa, Alfred C., Crystal City 63019
Judge, Walter T., Crystal City 63019
Kozal, Francis L., Crystal City 63019
McKinstry, Karl V., De Soto 63020
Mayfield, James L., Crystal City 63019
Rice, Carl E., Hillsboro 63050
Romero, Richard N., Crystal City 63019
Rutledge, John F., Festus 63028
Senn, Emmett J., Herculaneum 63048
Yoskit, Harry, Festus 63028

JOHNSON COUNTY MEDICAL SOCIETY
(Warrensburg 64093)

Cada, Edward G., Warrensburg
Cooper, R. Lee, Warrensburg
Cooper, Robert S., II, 122 E. Market,
Warrensburg 64093
Damron, Oscar H., Warrensburg
Folkner, A. L., Warrensburg
Gonzalez, M. Garza, Warrensburg
Grove, Gulph W., Knob Noster 65336
Hanna, Hugh A., Warrensburg
Harkness, Harry, Warrensburg
Johnson, Charles S., Warrensburg
Jones, Keith D., Warrensburg
Lederer, Charles M., Warrensburg
Maxson, T. Reed, Warrensburg
Reynolds, M. Wayne, P. O. Box 86,
Warrensburg 64093

KNOX COUNTY
(North Central Counties Medical Society)

LACLEDE COUNTY
(Mid-Missouri County Medical Society)

LAFAYETTE-RAY COUNTY MEDICAL SOCIETY

Baldwin, Theodore R., 1236 Jesse James Rd.,
Excelsior Springs 64024
Best, Robert, 9127 Riggs, Apt. 3, Over-
land Park, Kan. 66212
Boydston, Catherine, Odessa 64076
Boydston, W. Wayne, Odessa 64076
Brady, Hugh S., Concordia 64020
Brasher, Ben H., Lexington 64067
Cook, Thomas B., Richmond 64085
Cope, Joseph S., Lexington 64067
Crayton, Billy G., Waverly 64096
Crozier, Franklin A., Richmond 64085
Davault, George K., Richmond 64085
Fulkerson, Wilbur E., Higginsville 64037
Goldberg, Isadore E., Braymer 64624
Huber, K. Herbert, Richmond 64085
Kelling, Jordan, Waverly 64096
Koppenbrink, Walter E., Jr., Higginsville
64037
LaHue, William C., 402 N. 15th, Lexing-
ton 64067
McFadden, Gene A., Waverly 64096
Pavlu, Robert R., Waverly 64096
Riley, Charles T., Richmond 64085
Vajaranant, Manit, Medical Clinic,
Lexington 64076
Ward, Joe, Lexington 64067
Williams, John W., Oak Grove 64075

LAWRENCE COUNTY
(Ozarks Medical Society)

LEWIS-CLARK-SCOTLAND COUNTIES MEDICAL SOCIETIES

Davis, Landis Y., Canton 63435
Gilfillan, Earl E., Memphis 63555

LINCOLN COUNTY
(St. Charles-Lincoln Medical Society)

LINN COUNTY
(Grand River Medical Society)

LIVINGSTON COUNTY
(Grand River Medical Society)

MCDONALD COUNTY
(Ozarks Medical Society)

MACON COUNTY
(Chariton-Macon-Monroe-Randolph County Medical Society)

MADISON COUNTY
(Mineral Area County Medical Society)

MARIES COUNTY
(Mid-Missouri County Medical Society)

MARION-RALLS-SHELBY COUNTY MEDICAL SOCIETY
(Hannibal 63401)

Archer, Perry C., Shelbyville 63469
Bach, Lvsle M., 1734 Market St.
Buben, Robert W., 2910 St. Mary's Ave.

Burns, Francis R., Box 311
Burton, Dale F., 711 Grand
Clisham, John F., B & L Bldg.
Fischer, Thomas J., 2910 St. Mary's
Foreman, Phillip B., Box 311
Francka, W. F., 603 Country Club Dr.
Grant, Albert J., B. & L. Bldg.
Greene, Harry L., Holmes Bldg.
Hall, Stanley G., 9 Fair Oaks
Hamlin, Wveth, Box 311
Hinds, R. David, 3 Paulina Dr.
Lanning, Robert J., 115 N. 5th St.
Latimer, Walter N. A., 115 N. 5th
Lichty, Charles A., Shelbina 63468
Lucke, Eugene M., 4000 McMasters Ave.
Mann, James K., 4074 Hillside Dr.
Murphy, Bernard L., 2000 Crescent Dr.
Pena-Ramos, Abelardo, B&L Bldg.
Plovman, Edward M., B & L Bldg.
Rapp, Earl L., Box 311
Roller, Merrill J., 2910 St. Mary's
Steele, James C., Jr., Box 311
Swidnicki, Leonid, 15 Fairway
Walterscheid, John H., 1209 Broadway
Well, Julius W., Palmyra 63461

MERCER COUNTY
(Grand River Medical Society)

MID-MISSOURI COUNTY MEDICAL SOCIETY
(Phelps-Crawford-Dent-Pulaski-Maries-Laclede Counties)

Andreassen, Dimil F., Rolla 65401
Bass, Billy J., Salem 65560
Baumann, Albert R., Steelville 65565
Bealer, Louis A., Lebanon 65536
Butts, James D., Rolla 65401
Carnell, B. M., Camdenton 65020
Carrington, Howard W., Lebanon 65536
Cortez, Willie S., Lebanon 65536
Dierker, H. D., 301 W. Liberty St., Farm-
ington 63640
Drake, Avery A., Rolla 65401
Draper, Bernard, 700 W. 11th, Rolla 65401
Elders, Frank A., Jr., Cuba 65453
Feind, Earl E., Rolla 65401
Froelich, R. W., Lebanon 65536
Garrison, T. W., Camdenton 65020
Hammler, Christiana V., St. James 65559
Hart, Martin M., Salem 65560
Hite, Dennis E., Lebanon 65536
Holley, Donald B., Camdenton 65020
Miller, Clyde S., Waynesville 65583
Mitchell, Roy E., Salem 65560
Myers, James M., Rolla 65401
Pendell, Paul W., 215 W. Highway 72,
Rolla 65401
Porter, Jim C., Lebanon 65536
Riffel, Gordon W., Bourbon 65441
Russell, Barbara E., Rolla 65401
Smith, Ted P., Edgar Star Route, Rolla
65401
Stricker, Emil A., St. James 65559
White, Eugene F., 700 W. 11th, Rolla
65401
Young, Robert B., Rolla 65401

MILLER COUNTY MEDICAL SOCIETY

Buehler, Carl T., Jr., Eldon 65026
Shelton, Edward O., Eldon 65026

MINERAL AREA COUNTY MEDICAL SOCIETY

(St. Francois-Iron-Madison-Washington-Reynolds-Bollinger Counties)

Appleberry, Charles H., Rivermines 63668
Arat, Metin, Farmington 63640
Arguelles, Calixto Ramon, Farmington
63640
Burcham, Tom R., Jr., Farmington 63640
Cancelada, Juan, Farmington 63640
Carleton, Charles E., Jr., Farmington 63640
Chastain, Charles W., Farmington 63640
Crouch, F. Richard, Farmington 63640
Dennis, W. Paul, Flat River 63601
Dettmer, Robert F., Ironton 63650
Farmer, Norma D., Farmington 63640
Ford, William, Farmington 63640
Fraser, Richard A., Bonne Terre 63628
Grossman, Marvin, Fredericktown 63645
Hardy, Stanton L., Desloge 63601
Harland, Robert E., Ironton 63650
Hector, Emmett F., Farmington 63640
Huckstep, Robert A., Farmington 63640
Hunt, John W., Jr., Farmington 63640
Karraker, Alvan C., Farmington 63640
Mardini, Edward E., Bonne Terre 63628
Menne, Marvin C., Ironton 63650
Mullen, Jack, Bonne Terre 63628
Newcomb, Arthur D., 115 S. Wood Ave.,
Fredericktown 63645
Oliver, George A., Farmington 63640
Osborn, Retus W., III, Farmington 63640

Slaughter, Shelby C., Fredericktown 63645
Taylor, Van W., Bonne Terre 63628
Turner, Kirby L., Potosi 63664
Vester, James E., Bismarck 63624
Watkins, George L., Jr., Farmington 63640

MISSISSIPPI COUNTY
(SEMO County Medical Society)

MONITEAU COUNTY MEDICAL SOCIETY
(California 65018)

Fulks, Richard B., California
Gallagher, Lionel M., California
Latham, Kenyon S., California

MONROE COUNTY
(Chariton-Macon-Monroe-Randolph County Medical Society)

MONTGOMERY COUNTY MEDICAL SOCIETY

Andersen, Elmer J. T., Montgomery City
63361
Byland, Samuel J., Wellsville 63384
Helm, James O., New Florence 63363
Steinbeck, Herbert F., Route 2, Wilmington,
Ill. 60481

MORGAN COUNTY MEDICAL SOCIETY
(Versailles 65084)

Gunn, Jack, Versailles
Hall, C. Robert, Versailles
Kauffman, Ruth, Versailles
Lyle, Robert R., Versailles
Washburn, J. Loren, Versailles

NEW MADRID COUNTY
(SEMO County Medical Society)

NEWTON COUNTY
(Ozarks Medical Society)

NORTH CENTRAL COUNTIES MEDICAL SOCIETY
(Adair-Schuyler-Knox-Sullivan-Putnam Counties)
(Kirkville 63501)

English, Milton T., Jr., Kirkville
Freeman, Spencer L., Kirkville
Grim, Edward M., 807 Stadium Rd.,
Columbia 65201
Hasselblad, Oliver W., 297 Park Ave.,
South, New York, N. Y. 10011
Hilton, Paul E., Kirkville
Isom, Waldo B., Knox City 63446
Stickler, Ralph O., Kirkville
Tarvydas, Francis, Edina 63537

NORTHWEST MISSOURI MEDICAL SOCIETY

(Nodaway-Holt-Atchison-Gentry-Worth Counties)

Bare, Edward F., Tarkio 64491
Bauman, Henry C., Maryville 64468
Blacklock, David E., King City 64463
Byland, Benjamin F., Maryville 64468
Carlin, Albert L., Stanberry 64489
Carpenter, Wallace, Rock Port 64482
Dunshee, Robert E., Maryville 64468
Humphrey, James, Mound City 64470
Imes, Elvin D., Maryville 64468
Jackson, William R., Maryville 64468
Leach, Jon R., Maryville 64468
Matteson, Frank B., Grant City 64456
Morgan, Troy O., Jr., Albany 64402
Niedermeyer, Edward L., Tarkio 64491
Parsons, Bernie, Albany 64402
Wanamaker, John M., Rock Port 64482
Wempe, G. Raymond, Maryville 64468

OREGON COUNTY
(South Central Counties Medical Society)

OSAGE COUNTY
(Unorganized)

OSARK COUNTY
(South Central Counties Medical Society)

OZARKS MEDICAL SOCIETY
(Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald Counties)

Allison, Richard F., Mt. Vernon 65712
Anderson, Paul B., Neosho 64850
Betz, Richard J., Neosho 64850
Blankenship, George W., Neosho 64850
Bowman, Melvin C., Neosho 64850
Brasher, Charles A., Mt. Vernon 65712
Brown, Frederick B., Aurora 65605
Brown, Robert M., Neosho 64850
Capetti, Alex P., Crane 65633
Carter, James R., Neosho 64850
Christianson, Charles S., Mt. Vernon 65712
Coffman, Esther E. L., 1514 13th North,
Lakeworth, Fla. 33460
Crain, James W., Branson 65616
Dabbs, Wilbur D., Neosho 64850
Donley, Robert R., Monett 65708

* Doctor of Osteopathy.

Edwards, Francis L., Monett 65708
 Esparrago, Francisco R., Jr., Monett 65708
 Galinsky, Leon, Mt. Vernon 65712
 Gardner, Joseph W., Reeds Spring 65737
 George, W. D., Monett 65708
 Gillispie, Roy, Branson 65616
 Glass, William J., Jr., Monett 65708
 Glover, Kenneth, Mt. Vernon 65712
 Graves, Arthur J., Mt. Vernon 65712
 Hamilton, William P., Aurora 65605
 Hellweg, Charles E., Mt. Vernon 65712
 Huntington, Ione, Mt. Vernon 65712
 Kelsey, Kenneth L., Aurora 65605
 Kennev, Roy E., Neosho 64850
 Kerr, Frank T., Monett 65708
 Lentz, Harold C., Neosho 64850
 Magness, William C., Branson 65616
 Mars, Hartley F., Forsyth 65653
 Meridith, Mary Jane, Cassville 65625
 Meyers, Rossell C., 3757 Sheridan Rd., North, Chicago, Ill. 60626
 Moore, Allen H., Jr., Branson 65616
 Morrison, T. A., Aurora 65605
 Olive, George C., Neosho 64850
 Roper, Stanley D., Ozark 65721
 Schultz, Loraine E., Branson 65616
 Shumate, L. St. Clair, Reeds Spring 65737
 Spears, Charles A., 1153 W. Hwy. 76, Branson 65616
 Sweany, Henry C., 1502 W. Broadway, Columbia 65201
 Taylor, Leo T., Neosho 64850
 Wommack, Fred L., Crane 65633

PEMISCOT COUNTY MEDICAL SOCIETY

Aquino, Philip J., Caruthersville 63830
 Bernard, J. W., Caruthersville 63830
 Cain, Charles F., Caruthersville 63830
 Cook, Oliver W., Caruthersville 63830
 Cooper, Lawrence E., 1274 Hanton, Fort Myers, Fla. 33901
 Duckworth, Gordon Lee, Jr., Hayti 63851
 Grable, James, Portageville 63873
 Gubin, Alan S., Caruthersville 63830
 McCoy, Warren R., Caruthersville 63830
 McKaskle, Clarence W., Caruthersville 63830
 Painter, Andrew E., Portageville 63873
 Painter, Lattie B., Jr., Portageville 63873
 Shirey, Arnold G., Hayti 63851

PERRY-ST. GENEVIEVE COUNTIES MEDICAL SOCIETY

Carron, Oscar A., Perryville 63775
 DeGenova, Gerard H., Ste. Genevieve 63670
 Fairchild, James F., Perryville 63775
 Feltz, Lawrence W., Perryville 63775
 Fischer, Theodore, Altenburg 63732
 Lanning, Richard C., Ste. Genevieve 63670
 Lutkewitte, Joseph F., Ste. Genevieve 63670
 McDermott, Alfred E., Perryville 63775
 Miller, Oliver L., 1972 Bend Rd., Cape Girardeau 63701
 Utterman, William F., Perryville 63775

PETTIS COUNTY MEDICAL SOCIETY (Sedalia 65301)

Bess, William E., 914 S. Beacon Block, J. E., Box 1444
 Boger, James W., 500 W. 16th St.
 Brady, Charles H., Gordon Bldg.
 Braverman, Elliot M., 1501 S. Grand Ave.
 Brazos, John C., Smithton 65350
 Campbell, Albert I., Jr., 625 E. 13th
 Cole, William R., Rt. #1, Smithton 65350
 Daum, Harold F., Bothwell Memorial Hosp.
 Edmonds, Robert W., 1718 S. Ingram
 Edwards, David R., 700 S. Limit
 Eldenburg, Donald, 700 S. Limit
 Erickson, H. John, 1501 S. Grand
 Fisher, Stanley D., Sedalia
 Glass, Robert L., 720 S. Beacon
 Hopkins, Thomas J., 700 S. Limit
 Hopkins, T. Spencer, 1609 S. Limit
 Lamy, John E., 509 W. Broadway
 Lowe, Alvin L., 621 W. 16th St.
 Maddox, Albert R., 116 W. Main
 Owens, John H., Bothwell Memorial Hosp.
 Proctor, Donald C., 700 S. Limit
 Rhodes, Euhlan L., Warsaw 65355
 Roberts, Paul A., Sweet Springs 65351
 Stauffacher, C. Gordon, 700 S. Limit
 Stewart, Robert H., Bothwell Memorial Hosp.
 Stockwood, Robert C., 1718 S. Ingram
 Van Dyke, Elmer H., 1718 S. Ingram
 Walter, Archie L., 500 W. 16th St.
 Worley, Charles A., Sweet Springs 65351

PHELPS COUNTY (Mid-Missouri County Medical Society)

*Doctor of Osteopathy.

PIKE COUNTY MEDICAL SOCIETY

Christensen, Roger F., Louisiana 63353
 Jackson, Edward K., Clarksville 63336
 Lewellen, Charles H., Louisiana 63353
 Martin, W. Joe, Louisiana 63353
 Middleton, John W., Louisiana 63353
 Miles, Glenn E., Louisiana 63353
 Nickels, Mathew L., 420 Forest Hills Dr., Louisiana 63353
 Stuerman, Lawrence G., Louisiana 63353
 Wilcoxon, William B., Bowling Green 63334

PLATTE COUNTY MEDICAL SOCIETY

Allen, S. Lloyd, 3809 N.W. 62 Terr., Kansas City 64119
 Kimball, Ireland W., 5621 Valley Rd., Kansas City 64151
 Robinson, John A., Edgerton 64444
 Sincox, Charles H., Platte City 64079
 Thurman, Hill C., Parkville 64152
 Vescovo, Paul C., 4106 Vivion Rd., Kansas City 64119
 Wolfram, Philip H., Platte City 64079

POLK COUNTY (Dallas-Hickory-Polk-Dade County Medical Society)

PULASKI COUNTY (Mid-Missouri County Medical Society)

PUTNAM COUNTY (North Central Counties Medical Society)

RALLS COUNTY (Marion-Ralls-Shelby County Medical Society)

RANDOLPH COUNTY (Chariton-Macon-Monroe-Randolph County Medical Society)

RAY COUNTY (Lafayette-Ray County Medical Society)

REYNOLDS COUNTY (Mineral Area County Medical Society)

RIPLEY COUNTY (Butler-Wayne-Ripley County Medical Society)

ST. CHARLES COUNTY (St. Charles-Lincoln County Medical Society) (St. Charles 63301)

Baird, Keim L., 2850 W. Clay St.
 Beis, Louis D., 113 A-Okay Dr.
 Berry, Paul T., 1740 S. Glenstone, Springfield 65804
 Canty, Eugene J., 114 N. Main
 Carpenter, James L., 2 Westbury Square
 Clever, Henry W., Jr., 1301 Boonslick Rd.
 Commerford, John F., 1301 Boonslick Rd.
 Connelly, Michael W., 805 Paddock Dr., Florissant 63033
 Cottey, John H., 222 S. Second St.
 Creech, Joseph C., Troy 63379
 Crider, Russell J., 222 S. 2nd St.
 Damron, Edward O., Elsberry 63343
 Del Pizzo, Ferdinand, Jr., 1301 Boonslick Rd.
 Duling, Gerald J., 2850 W. Clay St.
 DuMontier, R. J., O'Fallon 63366
 Duncan, David, 2850 W. Clay
 Felder, James P., 449 Nantucket Dr.
 Fleming, Robert J., 120 Clay
 Goldkamp, John D., 2850 W. Clay St.
 Gore, Glenn L., 2414 W. Clay St.
 Hammes, Roman E., 2850 W. Clay St.
 Hetlage, Louis P., Troy 63379
 Kamada, Tsutomu, 115 W. Pitman, O'Fallon 63366
 Keller, Robert, 704 W. Pearce Blvd., Wentzville 63385
 Kister, George E., 302 S. 2nd St.
 Linsenmeyer, Charles M., 2850 West Clay
 McQueen, Samuel, 100 No. Euclid, St. Louis 63108
 Miller, Richard B., 2850 W. Clay
 Muenster, Vincent P., 2850 W. Clay St.
 Neubeiser, Ben L., 2nd & Clay Sts.
 Perna, Vincent P., 100 N. Euclid Ave. St. Louis 63108
 Poggemeier, William H., Jr., 302 S. 2nd St.
 Reisa, Ronald C., 2850 W. Clay
 Rice, Ronald B., 1301 Boonslick
 Ridzon, Thomas J., 2850 W. Clay St.
 Roach, Edward A., 2850 W. Clay St.
 Roter, Alexander M., #2 Westbury Dr.
 Rother, Paul H., 1301 Boonslick Rd.
 Sabet, Abdollah A., #2 Westbury Dr.
 Schneider, Thomas A., 2850 W. Clay St.
 Schuetz, Alfred, 904 Indian Hills
 Smoller, Martin B., 2850 W. Clay St.

Soucy, John C., 2850 W. Clay
 Tassi, Albert A., 6 Westminster Ct.
 Thiele, O. K., #2 Westbury
 Towers, Orville W., 1301 Boonslick Rd.
 Vafi, Houshang, #2 Westbury
 Vart, Gary R., 2850 W. Clay
 Westerfeld, Roy A., 1301 Boonslick Rd.
 Wipfler, Earl J., Jr., 405 Duckett
 Yaeger, Gerald A., 2444 W. Clay St.

ST. CLAIR COUNTY (West Central Missouri Medical Society)

ST. FRANCOIS COUNTY (Mineral Area County Medical Society)

STE. GENEVIEVE COUNTY (Perry-St. Genevieve Counties Medical Society)

ST. LOUIS MEDICAL SOCIETY (St. Louis)

Abel, Charles C., 4511 Forest Park Blvd. 63108
 Abel, Oliver, III, 4511 Forest Park Blvd. 63108
 Abelardo, Miguel L., 5400 Arsenal 63139
 Abell, Walter E., 2253 S. 39th St. 63110
 Abrams, Morris, 4919 Forest Park Blvd. 63108
 Acker, Harry L., 150 N. Meramec 63105
 Ackerman, Lauren V., 600 S. Kingshighway 63110
 Adler, Benard C., 4511 Forest Park Blvd. 63108
 Agasino, Guadencio L., 5203 Chippewa 63109
 Agress, Harry, 8631 Delmar 63124
 Aguinado, Jaime A., 5535 Delmar 63112
 Ahadi, Abd Ul Ahad, 13029 Ambois Dr. 63141
 Ahern, Archibald M., 3915 Watson Rd. 63109
 Ahlring, George H., 950 Francis Pl. 63105
 Ahmad, Bashir, 1515 Lafayette 63104
 Aitken, Louis F., 4989 Barnes Hosp. Plaza 63110
 Akyol, Salim, #4 Highfield Lane 63131
 Alegre, Jorge M., 5535 Delmar 63112
 Alexander, Frazier D., 4969 Enright 63108
 Allen, Henry C., Clayton Medical Bldg., 63105
 Allen, Hollis N., 634 N. Grand 63103
 Allen, Melvin A., 3701 Grandel Sq. 63108
 Allen, Willard M., 4911 Barnes Hosp. Plaza 63110
 Allen, William E., Jr., 720 N. Sarah 63108
 Almiron, Osias A., 6150 Oakland Ave. 63139
 Alonso, Jose Mario V., Jr., 10110 Hilltop Dr. 63128
 Alonso-Yague, P., 100 N. Euclid 63108
 Althede, J. Paul, 4605 Lindell 63108
 Alvarez, Luis L., 1606 Grattan 63104
 Alvis, Bennett Y., 211 N. Meramec 63105
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Bersche, Bertram L., 23 Beaver Dr. 63141
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Lyss, Stanley B., 8112 Delmar, University City 63130
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McNalley, Michael, 135 W. Adams 63122
Magee, Charles D., 48 Berkshire 63117
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Ann 63074
Womack, Granville J., 13443 Land O'Woods
Dr., Creve Coeur 63141
Wood, James A., 141 N. Meramec 63105
Wool, Gerald, 731 Oakbrook Lane 63132
Wulff, George J. L., Jr., 5505 Delmar 63112
Wyatt, Lois C., 134 W. Adams 63122
Yanow, Mitchell, 141 N. Meramec 63105
Yap, Mardonio J. R., 7521 W. Florissant
Ave. 63136
Yazdi, A. M., 16 Hampton Village Plaza
63109
Zeigler, Joseph M., 2325 Brook, Florissant
63033
Zimmerman, Herbert B., 17 Spoede Woods
63141
Zwirn, Benjamin H., Northland Medical
Bldg. 63136

* Doctor of Osteopathy.

SALINE COUNTY MEDICAL SOCIETY (Marshall 65340)

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Haynes, Robert C., Marshall
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Lawrence, John R., Marshall
McBurney, C. A., Slater 65349
McCorkle, E. Lee, Marshall
McCoy, Donald L., Marshall
Raynor, Richard, Marshall
Reid, James A., Marshall
Roehrs, Marvin E., Marshall
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SCOTLAND COUNTY (Lewis-Clark-Scotland County Medical Society)

SCOTT COUNTY (SEMO County Medical Society)

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pital, Sikeston 63801
Blanton, J. C., Sikeston
Bruce, Leo A., Sikeston
Buckthorpe, Thelma C., Sikeston
Ceas, Leandro P., Sikeston
Colbert, Robert S., Sikeston
Comeau, Richard, Dexter 63841
Critchlow, William C., Sikeston
Davis, Wilbur L., Charleston 63834
Downey, Jon Patrick, 747 Main, New
Madrid 63869
Dunaway, Howard A., Sikeston
Du Pont, Jean-René, Sikeston
Ferguson, Wilson J., Sikeston
Frazier, Robert L., Charleston 63834
Heeb, Max A., Sikeston
Husted, George W., Parma 63870
Jones, David N., 747 Main, New Madrid
63869
Martin, Andrew D., Sikeston
Page, Jesse W., Sikeston
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Rehm, Ralph, 603 N. Elm, Dexter 63841
Sandidge, Ernie L., New Madrid 63869
Sargent, Alden P., Sikeston
Sargent, John P., Sikeston
Shell, William C., Sikeston
Thornton, Fred H., 1012 N. Main,
Sikeston 63801
Throgmorton, Howard B., Sikeston
Tull, Frank, Sikeston
Urban, Edgar D., Sikeston
Waddle, Theodore L., Dexter 63840
Waltrip, Roy T., Jr., Sikeston
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SHANNON COUNTY (Carter-Shannon County Medical Society)

SHELBY COUNTY (Marion-Ralls-Shelby County Medical Society)

SOUTH CENTRAL COUNTIES MEDICAL SOCIETY (Howell-Oregon-Texas-Wright- Douglas-Ozark Counties)

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Coffee, Amos L., Willow Springs 65587
Cooper, Claude W., Thayer 65574
Denney, Richard W., Mountain Grove
65711
Dreyer, William F., Houston 65483
Fowler, Marvin L., West Plains 65775
Gentry, Marvin C., Ava 65608
Hasek, James A., Mountain Grove 65711
Hasek, O. Martin, Mountain Grove 65711
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Morgan, W. Thomas, Jr., West Plains 65775
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Smith, Rollin H., West Plains 65775
Spears, Joe L., Cabool, 65445
Walker, Ambrose T., Mammoth Spring,
Ark. 72554
Wall, Joe A., Houston 65483
Wiles, Jack N., West Plains 65775

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STONE COUNTY (Ozarks Medical Society)

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Macdonnell, Thomas M., Marshfield 65706

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Barone, Paul L., Nevada 64772
Brownsberger, Robert H., Appleton City
64724
Collantes, Jose L., 204 E. Black, Marshall
65340
Davis, C. Braxton, Nevada 64772
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Haynie, William W., Butler 64730
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King, Elbert R., Route 4, Boise, Idaho
83702
Lane, Jerald P., Franklin & Blaisdell, Min-
neapolis, Minn. 55404
Langeluttig, Harry V., Jr., Nevada 64772
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risonville 64701
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WORTH COUNTY (Northwest Missouri Medical Society)

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New Members . . . Address Changes . . . Notes

This space is provided for your convenience in recording names and addresses of new members of your county society, address changes of members you know and other notations you may wish to make.

Woman's Auxiliary to MSMA

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Troy 63379

FALL CONFERENCE—October 21-22, 1971—Holiday Inn, Cape Girardeau

1972 CONVENTION—April 6-9, 1972—Muehlebach Hotel, Kansas City

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St. Charles-Lincoln

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115 S. Cardinal La., St. Charles 63301

St. Louis City

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22 Rolling Rock Ct., St. Louis 63124

St. Louis County

MRS. LEON J. FOX

903 S. Warson Rd., St. Louis 63124

Saline

MRS. JAMES A. REID

102 East Rea, Marshall 65240

South Central

MRS. ROLLIN H. SMITH

West Plains 65775

West Central

MRS. A. W. EKLUND

1400 Country Club Dr., Pleasant Hill 64080

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SOCIETIES LISTED BY DISTRICTS

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THIRD DISTRICT: ST. LOUIS CITY.

FOURTH DISTRICT: FRANKLIN-GASCONADE-WARREN, JEFFERSON, Lincoln-St. Charles, ST. LOUIS COUNTY.

FIFTH DISTRICT: AUDRAIN, BOONE, CALLAWAY, Camden,** COLE, COOPER, Howard,* MIL-

LER-MORGAN-MONITEAU, Montgomery,* Osage.**

SIXTH DISTRICT: Benton,* Henry,* JOHNSON, LAFAYETTE-RAY, PETTIS, SALINE, WEST CENTRAL (Bates, Cass, Cedar, St. Clair, Vernon).

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* No organized Auxiliary.

** No Medical Society.

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 MRS. AUGUST A. WERNER* (St. Louis City) 1948-49
 MRS. JOHN J. O'CONNELL (St. Louis County) 1949-50
 1937 O'Connell Ave., Overland 63114

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 3510 Front St., San Diego, Calif. 92103
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 1535 E. Meadowmere, Springfield 65804
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 927 Hurt, Slater 65349
 MRS. WILFRED E. MARTIN (Lafayette-Ray) 1954-55
 403 E. 2nd, Odessa 64076
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** National President.

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Ross, Mrs. Gilbert, 300 McNabb Dr.
Russell, Mrs. Garth, 1210 W. Broadway
Scheuber, Mrs. Charles, 505 W. Boulevard S.
Senhauser, Mrs. Donald A., 1801 Ridgmont Rd.
Shively, Mrs. John, 1303 Parkridge Dr.
Sights, Mrs. Warren P., 309 Tracy Dr.
Silberman, Mrs. Henry K., 1012 Hickory Hill Dr.
Simmons, Mrs. Earl M., Jr., 2216 Ridgefield Dr.
Smith, Mrs. J. Ned, Jr., 701 W. Boulevard S.
Smith, Mrs. Joe R., 222 E. Parkway
Somers, Mrs. John, Route 3
Spratt, Mrs. John, Jr., 105 S. Glenwood
Spurgeon, Mrs. Milo, 404 Edgewood
Stephenson, Mrs. Hugh E., 5 Danforth Circle
Stoy, Mrs. Robert, 811 Canterbury Dr.
Sulzbach, Mrs. John F., 1003 Hickory Hill Dr.
Taylor, Mrs. D. Dax, 331 Proctor Dr.
Thomas, Mrs. Robert M., 2215 Danforth Ct.
Thompson, Mrs. Ian M., 504 Edgewood
Van Peenen, Mrs. Hubert J., 700 Westmount Ave.
Waggoner, Mrs. Charles, 712 Hilltop Dr.
Wakerlin, Mrs. George E., 3002 Bray Ave.
Washington, Mrs. Edward L., 204 West Stewart Rd.
Watson, Mrs. Trevor F., 2319 Bluff Blvd.
Weiss, Mrs. James, Route 2
Wheeler, Mrs. Paul, 405 Thilly
Wilson, Mrs. George P., 918 Westwinds Dr.
Wilson, Mrs. John, 1117 Woodhill Rd.
Windmiller, Mrs. M. Eugene, 210 S. Glenwood
Wolcott, Mrs. Lester, 2417 Beachview Dr.
Wolruff, Mrs. Calvin W., 1021 Lakeside Dr.

BUCHANAN COUNTY (St. Joseph)

Acuff, Mrs. Robert P., 3015 Miller Rd. 64506

Baker, Mrs. W. C., Savannah 64485
Beheler, Mrs. Edward M., 35 Ridgeland Rd. 64505
Benson, Mrs. Scott C., 4515 Stonecrest Terr. 64506
Berney, Mrs. Francis J., 1225 N. 10th 64501
Bryant, Mrs. Sydney L., 1805 N. 33rd 64506
Butler, Mrs. E. F., 3110 Douglas 64506
Callman, Mrs. George, P. O. Box 655, Fairleigh Station 64506
Carpenter, Mrs. G. T., 2612 Indian Trial Dr. 64506
Challener, Mrs. William A., III, 6 Dunn Dr. 64506
Chiarottino, Mrs. Joseph F., 419 N. 21st 64501
Christ, Mrs. Martin H., 414 Benton Dr. 64504
Cox, Mrs. John P., 4208 Miller Rd. 64505
Craig, Mrs. Owen W. D., 1625 Crescent Dr. 64506
Craig, Mrs. Richard D., 3900 Miller Rd. 64505
DuMont, Mrs. Clement, 1905 Francis 64501
Durham, Mrs. S. L., Dearborn 64439
Fischer, Mrs. Martin, 2914 Joslin La. 64506
Fisher, Mrs. Joseph L., 2903 Ashland 64506
Forgrave, Mrs. John R., 2611 Cornell 64506
Forgrave, Mrs. Leon Paul, Hundley Dr. 64506
Forman, Mrs. George W., 2412 Ashland 64506
Grimes, Mrs. Manning E., 815 N. Noyes Blvd. 64506
Gunter, Mrs. Joe S., 5710 Karrasch 64505
Hartigan, Mrs. F. X., 2602 Frederick 64506
Hayes, Mrs. Paul W., 610 N. Noyes Blvd. 64506
Herman, Mrs. Allen I., 1909 N. 32nd 64506
Howden, Mrs. T. L., 2723 Francis 64501
Ide, Mrs. Lucien W., 1416 N. 25th 64506
Kieber, Mrs. R. W., 1915 N. 33rd 64506
Kline, Mrs. Edmund W., 17 Stonecrest 64506
Knepper, Mrs. Paul, 2002 Ashland 64506
Kulowski, Mrs. Jacob, 700 N. 25th 64506
Lee, Mrs. Carleton H., 2716 Douglas 64506
Lehman, Mrs. Philip, 91 Stonecrest 64506
Luckinbill, Mrs. Paul, Plattsburg 64477
Mabrey, Mrs. John P., Plattsburg 64477
Maginn, Mrs. R. L., 12 Wishbone Rd. 64506
Marston, Mrs. F. James, 2114 Lovers La. 64505
Martin, Mrs. John, 9 Lindenwood La. 64505
McDaniel, Mrs. John R., 1808 N. 29th 64506
McDonald, Mrs. Wilbur P., 6 Country Club Rd. 64505
McGlothlin, Mrs. A. B., 821 N. 24th 64506
Moen, Mrs. Berwyn H., 2214 Carper Dr. 64506
Morse, Mrs. John Philip, 2912 Hampton Rd. 64505
Morse, Mrs. Marvin W., 2702 Faraon 64501
Mothershead, Mrs. John L., 2630 Fairleigh Terr. 64506
Ness, Mrs. Carl K., 8 Lindenwood La. 64505
O'Brien, Mrs. Liam, State Hospital, Box 263, 64502
O'Connor, Mrs. William B., 2316 N. 22nd 64505
Ozenberger, Mrs. Larry, West Grogan St., Plattsburg 64477
Pe, Mrs. Romualdo, 2818 Felix 64501
Petersen, Mrs. Harold E., 2902 Frederick 64506
Pfeffer, Mrs. Robert, 1915 N. 29th 64506
Pifer, Mrs. Lawrence H., 2130 Manchester Rd. 64505
Potter, Mrs. Caryl, Jr., 1 Pine Rd. 64505
Potter, Mrs. Thompson E., 2106 Lovers La. 64505
Prokop, Mrs. Joseph Robert, 29 Stonecrest 64506
Redmond, Mrs. William, 3102 Jule 64501

Riddell, Mrs. Richard V., 2610 Indian Trail Dr. 64506
 Rogers, Mrs. John T., 2502 Ashland 64506
 Rosenthal, Mrs. Irwin, 2715 Union 64506
 Rost, Mrs. William B., 2221 Northwest Ext. 64506
 Roundy, Mrs. Collis I., Rd. 2 64505
 Saferstein, Mrs. T. H., 2903 Sherman 64504
 Senne, Mrs. Herbert C., 1308 S. Noyes 64507
 Senior, Mrs. Earl, 2920 Renick 64507
 Shevlin, Mrs. Charles F., 840 N. 25th 64506
 Smith, Mrs. Clifton, 2821 Ashland 64506
 Stallard, Mrs. Donald J., 1417 N. 25th 64506
 Stevens, Mrs. Edward, 2923 Joslin La. 64506
 Sweiger, Mrs. James, Plattsburg 64477
 Thomas, Mrs. Forrest, 1301 N. 25th 64506
 Thompson, Mrs. F. Gregg, 111, 2714 Ashland 64506
 Tovar, Mrs. Manuel, 3209 Douglas 64506
 Villahermosa, Mrs. Juanito, Savannah 64485
 Wadlow, Mrs. Ernest E., 2611 Lovers La. 64506
 Waggoner, Mrs. Sharon E., 5820 S. 3rd 64504
 Weed, Mrs. Randall W., 1821 Clay 64501
 Weinand, Mrs. Ernest, 2002 N. 29th 64506
 Whitsell, Mrs. Ora Earl, 2306 Sacramento 64507
 Willman, Mrs. Charles, 2105 Lovers La. 64505

BUTLER-WAYNE-RIPLEY COUNTIES (Poplar Bluff 63901)

Barbour, Mrs. Marvin R., 1721 N. Main
 Biggs, Mrs. Fred J., Jr., 808 N. Main
 Brookreson, Mrs. A. Davis, 700 Hendrix Dr.
 Caldwell, Mrs. Fred, 2008 King Rd.
 Engelhardt, Mrs. Robert C., 1513 Rosedale La.
 Gernstetter, Mrs. S. L., P. O. Box 337
 Hansbrough, Mrs. Eugene T., 1111 Fairmount
 Hecker, Mrs. J. E., 2019 Woodhaven
 Hoja, Mrs. W. Alexander, Route 2, Box 16
 Hunt, Mrs. John, Jackson Rd.
 Kneibert, Mrs. F. L., 1301 Barron Rd.
 Ladyman, Mrs. George H., 1403 Lurlyn Rd.
 McCauley, Mrs. B. J., 115 Elm
 McLain, Mrs. B. M., Route 2, Hwy. 67 So.
 McLane, Mrs. Jerry F., 2107 Jackson Rd.
 Miller, Mrs. David V., Route 1
 Parker, Mrs. Arthur C., 708 Selma
 Post, Mrs. Cyril A., 960 Cynthia
 Ramirez, Mrs. Ricardo, 1111 Fairmount
 Raper, Mrs. Charles A., Route 2, Box 17B
 Robertson, Mrs. William D., 900 North
 Ruff, Mrs. T. Eugene, 1411 Rosedale
 Tapp, Mrs. Ernest M., 1401 Lurlyn Rd.
 Till, Mrs. Bennie, Meadows Rd.
 Tuma, Mrs. A. T., 1601 Big Bend Rd.
 Ward, Mrs. Robert, 2026 Schweitzer Dr.
 White, Mrs. Barry B., 2521 Park Pl.

CALLAWAY COUNTY (Fulton 65251)

Brown, Mrs. John J., 1304 N. Vine
 Cremer, Mrs. William J., State Hospital Dr.
 Durst, Mrs. Henry, 1 Ivy Lane
 Groce, Mrs. George, 1 Bartley Lane
 Hill, Mrs. James E., Washington
 Jackson, Mrs. Vernon, State Hospital Dr.
 Osbourn, Mrs. Richard A., 503 Douglas Blvd.
 Peterson, Mrs. Donald, State Hospital # 1
 Ritterbusch, Mrs. James K., 2 Bartley Lane
 Sydow, Mrs. Henry, 1411 Kenwood Dr.
 Tuttle, Mrs. Jay F., 4 Reed
 Wood, Mrs. George F., 1700 Plaza Dr.

CAPE GIRARDEAU COUNTY (Cape Girardeau 63701)

Alyea, Mrs. James, 1869 Drury Lane
 Barnes, Mrs. Seth S., 1854 Broadway
 Blankenship, Mrs. Dale, 907 W. Cape Rock Dr.
 Burford, Mrs. Edwin K., 2424 Terrie Hill
 Campbell, Mrs. Edward, 1100 N. Henderson
 Chapman, Mrs. Jean Allen, 1150 N. Henderson
 Cozean, Mrs. Charles, 1548 Oak Lei
 Crowe, Mrs. John, 1000 N. Henderson
 Dinkins, Mrs. James, 1323 Perryville Rd.
 Elrod, Mrs. Dennis B., 2500 Fairlane
 Estes, Mrs. Albert, 714 Broadway
 Herbert, Mrs. Charles, Sylvan La.
 Holcomb, Mrs. John K., 825 N. Fountain

Hoxworth, Mrs. Gerald, 1624 Oxford
 Hunt, Mrs. Robert S., 2021 Sherwood Dr.
 Jaeger, Mrs. Joseph, 208 S. High, Jackson 63755
 Johnson, Mrs. Earl Wayne, 1044 N. Henderson
 Johnson, Mrs. E. D. Jack, III, 1742 Lake Shore Dr.
 Kasten, Mrs. Melvin C., 1209 Sailor Circle
 Keim, Mrs. J. Harry, 643 N. West End Blvd.
 Kinder, Mrs. James, Route 1, Box 135
 Kinder, Mrs. Jerry L., 753 Perry Ave.
 Kratz, Mrs. Paul, 1720 Cecilia
 Lovinggood, Mrs. Thomas, 2505 Allendale Dr.
 Magaletta, Mrs. George, 957 Rodney Dr.
 McDonald, Mrs. Eugene, 225 W. Main, Jackson 63755
 McGinty, Mrs. Charles, 2435 Brookwood
 Nunnally, Mrs. Gordon, 1432 Themis
 Nussbaum, Mrs. Paul, 209 Sunset Blvd.
 Oehler, Mrs. William, 1617 Themis
 Otto, Mrs. Thomas, 511 Alta Vista
 Parsons, Mrs. LeRoy, Chateau Oaks
 Rapp, Mrs. Harold, 1011 N. Henderson
 Rawlins, Mrs. Fred, 1607 Bertling
 Reynolds, Mrs. Garland, P. O. Box 817
 Ritter, Mrs. Raymond A., 1257 Rockwood Dr.
 Seabaugh, Mrs. Loy, 811 E. Rodney
 Seabaugh, Mrs. William, Route 2, Box 563
 Shoss, Mrs. Milton, Route 1
 Sparkman, Mrs. Thomas, 1629 Oxford Dr.
 Terry, Mrs. James W., 2530 Jonquil
 Tygett, Mrs. Glenn, 834 Alta Vista
 Tygett, Mrs. Joseph, 2112 Woodhaven
 Weeks, Mrs. George, 1814 Scott's Lane
 Williams, Mrs. W. A., Jr., Route 2, Box 501
 Wilson, Mrs. Charles, Oak Lei Dr.
 Wolff, Mrs. Paul, 90 E. Cape Rock Dr.

CLAY COUNTY (Kansas City)

Adams, Mrs. Howard, 1905 Snow Drop Circle, Liberty 64068
 Allen, Mrs. Louis, 501 S. Woodland Dr. 64118
 Armstrong, Mrs. Jay H., 4812 Black Swan Dr., Shawnee Mission, Kan. 66216
 Arst, Mrs. Herbert E., 1201 E. 81st St. No. 64118
 Balhuizen, Mrs. John, 11 Hill 64116
 Banks, Mrs. Frank R., 202 Owens Ave., Smithville 64089
 Bates, Mrs. G. Comer, 102 E. 43rd St. No. 64116
 Bowles, Mrs. Richard, 414 N. Ridge, Liberty 64068
 Burk, Mrs. E. K., 630 NW 42nd Terr. 64116
 Castillo, Mrs. Michael E., 530 N. W. 43rd Terr. 64116
 Chastain, Mrs. Maurice W., 3 E. 47th N. 64116
 Chiles, Mrs. David R., Smithville 64089
 Cook, Mrs. Jerry W., 3616 N. E. 67th 64119
 Denton, Mrs. Robert, 716 Manzonola, Smithville 64089
 Dernoncourt, Mrs. John, 603 Quincy, Smithville 64089
 Devine, Mrs. Mark W., Jr., 8105 W. 72nd, Shawnee Mission, Kan. 66204
 Edwards, Mrs. Theodore F., 512 N.W. 43rd Terr. 64116
 Fakhoury, Mrs. Donald A., 4332 N. Central 64116
 Fischer, Mrs. Edward H., 4218 Briarcliff Lane 64116
 Fotopoulos, Mrs. Chris K., 2917 Cheyenne Circle, North 64116
 Fowler, Mrs. I. Charles, 700 E. Barnes Ave. 64118
 Gauer, Mrs. Robert J., 525 N.W. 43rd Terr. 64116
 Hafner, Mrs. Joel, 6908 N. Overland Dr. 64151
 Haley, Mrs. Ted M., 4121 N. Briarcliff Rd. 64116
 Hall, Mrs. James W., 5701 N. Lake 64118
 Hayes, Mrs. Lawrence L., 440 N. Woodland Dr. 64118
 Hedges, Mrs. Richard C., 1017 Southwind Dr., Excelsior Springs 64024
 Hobbs, Mrs. Earl B., Smithville 64089
 Hodge, Mrs. Robert H., 2214 E. 39th St. No. 64116
 Huddleston, Mrs. Harvey, Smithville 64089
 King, Mrs. Phillip, 429 W. Franklin, Liberty 64068
 Kirkland, Mrs. Jerry, 6604 N.W. Overland Dr. 64151

Kuenzi, Mrs. Donald E., 924 S. Woodland Dr. 64118
 Langhus, Mrs. Melvin D., 104 W. Englewood Rd. 64118
 McCormick, Mrs. James E. 309 Northcrest Dr. 64116
 McPhee, Mrs. William R., 1205 W. 76th 64114
 Mullins, Mrs. B. L., 510 N. E. 106th 64155
 Parker, Mrs. Robert H., 112 E. 43rd St. No. 64116
 Perico, Mrs. Carlos, 8446 Juniper, Prairie Village, Kan. 66207
 Perry, Mrs. Lawrence L., Jr., 6300 N. Lenox 64151
 Pileggi, Mrs. Felix A., 424 N.W. Briarcliff Rd. 64116
 Purcell, Mrs. Paul, 4 Carver, Smithville 64089
 Reeder, Mrs. Charles C., 3 Maple Circle, Smithville 64089
 Revare, Mrs. Paul, 3245 Chippewa Dr. 64116
 Robinson, Mrs. Van M., 415 Briarcliff Ct. 64116
 Schertz, Mrs. Truman B., 428 N.W. Briarcliff Rd. 64116
 Schultz, Mrs. Robert, 1200 Middlebrook Dr., Liberty 64068
 Slaughter, Mrs. Carl, 1001 No. Woodland 64118
 Somoza, Mrs. Jose, 15 N.E. Hill 64116
 Soper, Mrs. William, 203 Garden La., Excelsior Springs 64024
 Spelman, Mrs. Arch E., Bridge St., Smithville 64089
 Sportsman, Mrs. Weldon L., Route 2, Smithville 64089
 Stratman, Mrs. Clarence A., 1500 N. E. 57th Terr. 64118
 Triplett, Mrs. Daniel A., 1011 Scott Dr., Liberty 64068
 Wald, Mrs. Donald, 1608 E. 69th St. No., Gladstone 64118
 Waterman, Mrs. Franklin M., 420 Glendale Rd., Liberty 64068
 Werner, Mrs. Dean F., 4609 N. Main 64116
 Werner, Mrs. Franklin C., 422 Sagamore La. 64116
 Williams, Mrs. John M., 616 Ridgeway Dr., Liberty 64068
 Williams, Mrs. R. D., 506 Liberty Rd., Smithville 64089
 Withrow, Mrs. John B., 3925 N. Main 64116
 Wright, Mrs. Earl, 4319 Claymont Dr. 64116

COLE COUNTY (Jefferson City 65101)

Belden, Mrs. E. A., 2124 Lowell
 Bowe, Mrs. Ted, 2503 Schellridge Dr.
 Bregant, Mrs. Robert, 3435 Country Club Dr.
 Cooper, Mrs. Charles Winston, 508 E. Miller
 Courter, Mrs. Larry, 809 Ihler
 Cox, Mrs. William A., 812 Swifts Highway
 Dorris, Mrs. Richard P., 1611 Ridgewood
 Doyle, Mrs. Matthew J., 2411 Livingston
 Enloe, Mrs. L. David, 1200 Moreland
 Exon, Mrs. C. Stuart, 916 Boonville
 Files, Mrs. James, 109 Hi-View
 Fullgrabe, Mrs. Emil A., 1915 Green Meadow Dr.
 Garner, Mrs. Lynn M., 403 Meier Dr.
 Gordon, Mrs. James, 600 Boonville Rd.
 Gove, Mrs. Herman S., 712 Broadway
 Guhleman, Mrs. Henry V., Jr., 2018 Greenberry Rd.
 Gunnee, Mrs. Landon H., 2941 Country Club Dr.
 Handler, Mrs. Fred P., 614 Boonville Rd.
 Hauser, Mrs. Robert J., Schott Rd.
 Kanagawa, Mrs. Harold Hajime, 816 Houchin
 Kelly, Mrs. Marshall W., 1916 Greenberry Rd.
 Klebba, Mrs. Larry B., 3300 Country Club Rd.
 Leslie, Mrs. James P., 933 Fairmount
 Leslie, Mrs. James T., Jr., 1824 Brookside Blvd.
 Loyd, Mrs. Earl L., Riviera Heights, Holts Summit 65043
 McHaney, Mrs. John W., 1819 Brookside
 McKnelly, Mrs. William V., 1106 Lee
 Matthews, Mrs. John I., 1314 Moreau Dr.
 Meier, Mrs. Francis X., 1913 Hayseleton Dr.
 Meinershagen, Mrs. Charles W., 138 Forest Hill
 Morgan, Mrs. Philip E., 2121 Cedar Hills Rd.
 Ossman, Mrs. Julian A., 2407 West Main

Ringo, Mrs. Henry, Centertown 65023
Robb, Mrs. Harold P., 1117 Leslie Blvd.
Russell, Mrs. Joseph P., 1717 Greenberry Rd.
Ryan, Mrs. Thomas J., 1109 Moreau Dr.
Sanders, Mrs. Jack Shelby, 1820 Brookside Blvd.
Schmidt, Mrs. Jerome H., 806 Boonville Rd.
Scott, Mrs. David, 957 Westwood
Sennott, Mrs. John Stephen, 123 Douglas Dr.
Shull, Mrs. G. Donald, 1925 Hayseton Dr.
Siu, Mrs. Kenneth C., 108 Belair Dr.
Stauffer, Mrs. Harry Beach, 830 Boonville Rd.
Stricker, Mrs. Harold C., 1205 Moreau Dr.
Sugarbaker, Mrs. Everett D., 2113 W. Main
Summers, Mrs. Joseph S., Jr., 2313 W. Main
Tanner, Mrs. Robert H., 1910 Greenberry Rd.
Taylor, Mrs. Leon A., 1104 W. Main
Tietjen, Mrs. Fred C., 7 Greentree Rd.
Wallace, Mrs. John K., 220 Ridgeway
Watts, Mrs. Byron Edward, 2112 Forest Dr.
Winegar, Mrs. Alvon C., 1004 Swift's Highway

**COOPER COUNTY
(Boonville 65233)**

Abele, Mrs. William Arved, Krohn Dr.
Avery, Mrs. Willard Bartlett, 10 Oak Valley Rd.
Diekroeger, Mrs. Manuel Louis, Route 2
Hata, Mrs. Daikichi, 7 Morningside Dr.
Humphreys, Mrs. Edward Tristran, 1123 Third
Stuart, Mrs. Byron McClellan, 910 Shamrock Terr.
Winn, Mrs. George Warren, 607 Poplar
Zeigler, Mrs. William Henry, Weyland Dr.

**DUNKLIN COUNTY
(Kennett 63857)**

Benson, Mrs. Leo J. J., 204 Wiggs
Cash, Mrs. Charles R., 1112 White Oak Place
Dunmire, Mrs. George O., 504 S. Baker Dr.
Garrison, Mrs. Norman A., Jr., 915 S. Jackson
Legan, Mrs. John K., 617 Butler
Miltenberger, Mrs. Paul E., 705 W. Washington
Palenske, Mrs. R. L., Box 57, Hornersville 63855
Peck, Mrs. C. R., 234 S. Main
Pu, Mrs. Pin H., 1105 W. Eighth
Tarver, Mrs. Quinton, Box 647
Wilson, Mrs. Loys C., 915 S. Jackson
Zimmerman, Mrs. Joe A., 1105 White Oak Pl.

**FRANKLIN-GASCONADE-WARREN
COUNTIES**

Baker, Mrs. Donald L., Route 1, Union 63084
Bonney, Mrs. Sam, Washington 63090
Bozzo, Mrs. Raymond J., 1235 W. Main, Washington 63090
Brenner, Mrs. Paul A., 108 W. Washington Ave., Owensville 65066
Eisenmann, Mrs. Benjamin B., New Haven 63068
Farrell, Mrs. S. L., 205 Elm, Washington 63090
Hoelscher, Mrs. H. F., Hickory Haven, Warrenton 63383
Mitchell, Mrs. Thomas J., 501 Highway Dr., St. Clair 63077
Moellenhoff, Mrs. Robert, 2315 E. 5th, Washington 63090
Muench, Mrs. Ludwig O., 1530 Riverview Dr., Washington 63090
Richardson, Mrs. G. A., Union 63084
Richardson, Mrs. W. R., 301 Hwy. 50 West, Union 63084
Schmidt, Mrs. Charles, Box 143, Gerald 63067
Strehlman, Mrs. Benjamin G., 510 West End, Union 63084

**GRAND RIVER COUNTIES
(Caldwell-Carroll-Livingston-Grundy-
Davies-Harrison-Linn-Mercer-
DeKalb Counties)**

Allen, Mrs. E. W., 1202 N. Jefferson, Carrollton 64633
Acheson, Mrs. Windsor, 108 Kavanaugh, Trenton 64683
Bales, Mrs. Eugene, 502 W. 3rd Terr., Carrollton 64633
Bohnsack, Mrs. Ralph, 635 Skyline Dr., Brookfield 64628

Conrad, Mrs. Joseph, 1202 Jackson, Chillicothe 64601
Cross, Mrs. Albert, 1903 Moberly Rd., Trenton 64683
Daley, Mrs. Frank, 508 E. Samuel, Hamilton 64644
Dixon, Mrs. John, 1005 Brookfield, Brookfield 64628
Dowell, Mrs. Donald, 1830 Calhoun, Chillicothe 64601
Ellsworth, Mrs. Willard, Cainsville 64632
Fair, Mrs. William, 1705 Calhoun, Chillicothe 64601
Fuson, Mrs. William, 520 Pleasant View, Trenton 64683
Gale, Mrs. Joseph, 1710 Polk, Chillicothe 64601
Gearhart, Mrs. Merriam, 2100 Beekman, Bethany 64424
Howell, Mrs. Billy, 157 Hunt, Brookfield 64628
Mandler, Mrs. George, 1616 Clay, Chillicothe 64601
Smith, Mrs. Robert, Country Club Dr., Brookfield 64628
Vandiver, Mrs. V. D., 1024 Grandview, Chillicothe 64601

**GREENE COUNTY
(Springfield)**

Allen, Mrs. Jerry H., 1324 S. Fairway Terr. 65804
Anthony, Mrs. Dallas D., 1322 S. Pickwick 65804
Ash, Mrs. Charles J., 743 Riverside 65504
Ashley, Mrs. Thomas E., 2740 Pythian 65802
Atkinson, Mrs. Thomas E., Route 9, Box 81A 65804
Auner, Mrs. Cecil R., 649 McCann 65804
Back, Mrs. Donald K., 2852 S. Glendale 65804
Baldwin, Mrs. Richard M., 2033 Prairie Lane 65804
Barnhill, Mrs. Floyd, 3215 Bellhurst 65804
Bentley, Mrs. John, 2830 Chantilly 65804
Blades, Mrs. Ross, 2308 Barataria 65804
Bonebrake, Mrs. McDonald D., 1443 S. Delaware 65804
Broadus, Mrs. Loren, 2725 S. Patterson 65804
Brown, Mrs. David W., 2911 Melbourne Rd. 65804
Brown, Mrs. Lyman, 1410 N. Rogers 65802
Burkey, Mrs. Jordon W., 2405 Sheridan 65804
Busick, Mrs. Paul, Route 9 65804
Busiek, Mrs. Urban J., 1635 E. Walnut 65802
Callaway, Mrs. Guy, Jr., 901 E. Portland 65804
Callaway, Mrs. Guy D., 1155 S. Delaware 65804
Carr, Mrs. Phillip, 1260 E. Catalpa 65804
Cheek, Mrs. Anne C., 1535 E. Meadowmere 65804
Cheek, Mrs. James W., 2342 Fitts La. 65804
Christy, Mrs. Raymond A., 2738 S. Marlan 65804
Clary, Mrs. Wm. W., 2259 Mirabeau 65804
Clawson, Mrs. J. W., 2257 Rosebrier 65804
Clayton, Mrs. Edgar L., 2446 Brentwood 65804
Conrad, Mrs. Raymond C., 1338 S. Delaware 65804
Cordonnier, Mrs. James K., 2320 E. Rosebrier 65804
Cox, Miss Eleanor, 1072 Roanoke 65804
Crawford, Mrs. Oral, Route 1, Box 443 65803
Cunningham, Mrs. D. Dean, 1425 S. Delaware 65804
Dolan, Mrs. Daniel L., 2413 Claremont 65804
Domann, Mrs. Darrel, 2506 E. Cherokee 65804
Duncan, Mrs. Robert D., 1234 E. Loren 65804
Elkins, Mrs. Ronald F., 2830 E. Glenwood 65804
Ellis, Mrs. Francis J., 2235 E. Glenwood 65804
Ellis, Mrs. Harry L., 2124 E. Edgewood 65804
Emery, Mrs. Frank E., 4308 Ridgeview 65804
Evans, Mrs. E. L., 833 E. Elm, 65804
Farthing, Mrs. F. R., 1234 E. Walnut 65802
Farthing, Mrs. Gene W., 1235 E. Walnut 65802

Ferguson, Mrs. John P., 1219 S. Clay 65804
Fessenden, Mrs. Ersel M., 634 E. Kingsbury 65804
Fitch, Mrs. Max, 2523 S. Marlan 65804
Francis, Mrs. William C., 2820 E. Glenwood 65804
Freeman, Mrs. S. F., 1339 S. Pickwick 65804
Fry, Mrs. Mellon A., 2125 E. Meadow Dr. 65804
German, Mrs. Walter A., Jr., 2659 Luster 65804
Giddings, Mrs. Frank C., 1211 S. Pickwick 65804
Giffin, Mrs. James, Route 2, Box 91 65802
Glynn, Mrs. Robert R., 1101 Benton 65802
Gorelick, Mrs. David F., 1041 Linwood Terr. 65804
Gose, Mrs. Don F., 1339 S. Delaware 65804
Griot, Mrs. Mary J., 1640 E. Sunshine 65804
Haen, Mrs. Charles, Route 3, Box 474 65804
Hall, Mrs. Durward G., 2442 S. Fremont 65804
Haran, Mrs. Ernest B., 724 E. Kingsbury 65804
Harrison, Mrs. S. W., 3031 Shalimar 65804
Harvey, Mrs. Harold D., 2531 Brentwood 65804
H'Doubler, Mrs. Alice, Route 7, Box 207 65802
H'Doubler, Mrs. Charles E., 1421 Bedford Rd. 65804
H'Doubler, Mrs. F. T., Jr., 2445 Melbourne Rd. 65804
H'Doubler, Mrs. Peter B., 1137 S. Pickwick 65804
Herfkens, Mrs. Kenneth, 2717 S. Marlan 65804
Hills, Mrs. Joe E., 2917 Natural Bridge 65804
Holland, Mrs. Robert, 2225 E. Edgewood 65804
Hollis, Mrs. Richard, 2236 Englewood Rd. 65801
Holmes, Mrs. Daniel E., Route 9, 4318 Sunset 65804
Holmes, Mrs. David R., 2237 E. Rosebrier 65804
Horton, Mrs. James D., 1235 E. Delmar 65804
Huewe, Mrs. Douglas H., 2204 Claiborne 65804
Hulstra, Mrs. Han F. W., 2652 S. Luster 65804
Ivy, Mrs. H. Berry, 215 E. Sunshine 65804
Jobe, Mrs. Charles, 2415 E. Edgewood 65804
Johnson, Mrs. Warford B., 2244 Edgewood 65804
Johnson, Mrs. William F., 973 E. Linwood 65804
Johnston, Mrs. Joseph L., 2855 Southern Hills 65804
Jones, Mrs. Harold L., 2461 S. McCann 65804
Key, Mrs. James S., 2278 Englewood 65801
Klingner, Mrs. George M., Turners 65765
Klingner, Mrs. George M., Route 3, Box 202, Rogersville 65742
Knabb, Mrs. Kenneth E., 1229 E. Catalpa 65804
Langston, Mrs. W. Roland, 1453 S. Fairway 65804
Leagus, Mrs. Charles, 2311 E. Rosebrier 65804
Lemmon, Mrs. G. Bruce, 1462 Virginia 65804
Lewis, Mrs. Noel R., Route 1, Strafford 65757
Littin, Mrs. Lyle, 3044 Shalimar 65804
Lockhart, Mrs. Charles E., 1600 E. Catalpa 65804
Loeb, Mrs. Richard, 2924 S. Barnes 65804
Loren, Mrs. Ernest, 2819 Canyon Dr. 65804
Lovett, Mrs. Robert L., 2743 S. Luster 65804
Lowe, Mrs. H. A., Jr., 1700 E. Walnut 65802
Lurie, Mrs. Harold H., 2440 Skyline Dr. 65804
Maple, Mrs. Francis M., 2115 E. Edgewood 65804
Maples, Mrs. Ruth, 836 E. Eastwood, Marshall 65340
McAlhany, Mrs. Howard J., 1643 E. Catalpa 65804
McKinsey, Mrs. John J., 2504 S. Franklin 65804
Menchetti, Mrs. Don E., Route 9, Box 425A 65804

Michael, Mrs. Harvey R., 2847 S. Chantilly 65804
 Milne, Mrs. Jay L., 1903 E. Meadow Drive 65804
 Moseley, Mrs. F. Thomas, 2837 Lomita Circle 65804
 Napper, Mrs. Marvin, Route 1, Ash Grove 65804
 Neu, Mrs. Leo T., 3008 Carlisle Circle 65804
 Olson, Mrs. E. Rule, 2645 Wildwood Rd. 65804
 Overend, Mrs. Don F., 3020 Ridge Dr. 65804
 Palchiff, Mrs. Chris L., Route 9, Box 400L 65801
 Park, Mrs. William L., 815 E. Portland 65804
 Parlato, Mrs. George, 2204 Shady Glen 65804
 Penninger, Mrs. William H., 2246 Claiborne 65804
 Peterson, Mrs. Stanley S., 721 E. Stanford 65804
 Podrecca, Mrs. Guido I., 2550 Brentwood Blvd. 65804
 Prater, Mrs. Bill George, 3000 Carlisle Circle 65804
 Pruett, Mrs. Paul L., Route 9, Box 425 65804
 Quinn, Mrs. Paul, 2857 Chantilly 65804
 Rhoads, Mrs. Jonathan E., Jr., 1218 W. Linwood Dr. 65804
 Robinson, Mrs. Gary L., 2117 E. Montclair 65804
 Rosen, Mrs. Max, 900 E. Walnut 65806
 Sala, Mrs. Jose M., 2901 Utica 65804
 Schaeffer, Mrs. Edward, 2218 Shady Glen Dr. 65804
 Schrott, Mrs. Carle H., 2448 E. Broadmoor 65804
 Schwartz, Mrs. Eugene J., 1315 E. Loren 65804
 Schweitzer, Mrs. Fred C., 2550 Luster 65804
 Shackter, Mrs. Bruce L., 2534 Barataria 65804
 Shane, Mrs. Ramon, 3165 Glenhaven 65804
 Shcluff, Mrs. Joseph C., Route 9, Box 84M 65804
 Simpson, Mrs. E. L., 2133 Meadowview 65804
 Sneed, Mrs. William H., 2532 Sheridan 65804
 Spalding, Mrs. David, 2971 Southern Hills Blvd. 65804
 Stewart, Mrs. Robert B., 2360 E. Grand 65804
 Stewart, Mrs. R. Wendell, 2028 Windsor Dr. 65804
 Stuffleham, Mrs. Robert E., 2323 E. Rosebrier 65804
 Sturtevant, Mrs. Harwood N., 2859 Utica 65804
 Sweeney, Mrs. Thomas, 2544 E. Greenwood 65804
 Tarrasch, Mrs. Ernest, 2114 Langston 65804
 Terry, Mrs. James F., Jr., 2471 Sheridan 65804
 Thomasson, Mrs. David D., 2311 E. Glenwood 65804
 Tillman, Mrs. Walter, 1220 E. Loren 65804
 Tombridge, Mrs. T. L., 2830 S. Marlan 65804
 Trotter, Mrs. W. Yates, 1243 E. Catalpa 65804
 Turner, Mrs. Glenn O., 1462 S. Dollison 65804
 Vail, Mrs. A. Denton, 1307 E. Catalpa 65804
 Vensel, Mrs. Lee H., Jr., 2255 Meadowview 65804
 Waddell, Mrs. Kenneth, 1126 S. Kentwood 65804
 Wakeman, Mrs. J. Newton, 1402 Meadowmere 65804
 Walker, Mrs. William M., 2845 Southern Hills Blvd. 65804
 Warren, Mrs. Herbert L., 2614 Englewood Rd. 65801
 Waterfield, Mrs. Jim, 2565 Sheridan 65804
 Webb, Mrs. Richard, 1243 E. Loren 65804
 White, Mrs. R. Ned, Route 9, Box 600 65804
 Whitlock, Mrs. Courtney, 1340 S. Delaware 65804
 Williams, Mrs. John W., 2245 Fritts Lane 65804
 Wilson, Mrs. Roy E., Route 9, Box 207 65804

Wise, Mrs. Gordon F., 2850 Southern Hills 65804
 Wittmer, Mrs. Samuel C., 2314 E. Washita 65804
 Wooldridge, Mrs. Wilfred E., 1126 E. Stanford 65804
 Wyrsch, Mrs. Leo M., 2056 S. Meadowview 65804
 Yancey, Mrs. Daniel L., 1133 S. Weller 65804
 Zahn, Mrs. Robert, 1528 S. Fairway 65804

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 Abella, Mrs. Terry K., 8967 E. 62nd Terr. 64133
 Abrams, Mrs. Bernard M., 1021 W. 69th 64113
 Adelman, Mrs. Arthur, 6305 Aberdeen, Shawnee Mission, Kan. 66208
 Agee, Mrs. Loren Glenn, 7400 W. 101st, Shawnee Mission, Kan. 66212
 Aks, Mrs. Daniel, 3100 W. 68th, Shawnee Mission, Kan. 66208
 Alderman, Mrs. Thomas F., 309 E. 127th 64145
 Allebach, Mrs. Hobart K. B., 4308 W. 93rd, Shawnee Mission, Kan. 66207
 Allen, Mrs. William Bayne, 2801 W. 63rd, Shawnee Mission, Kan. 66208
 Alsop, Mrs. Webb S., Jr., 3604 W. 53rd, Shawnee Mission, Kan. 66205
 Altringer, Mrs. Arthur N., 5630 Mission Dr., Shawnee Mission, Kan. 66208
 Ammatelli, Mrs. F. J., 1235 W. 57th Terr. 64113
 Anderson, Mrs. Raymond B., 6024 State Line, Shawnee Mission, Kan. 66208
 Anderson, Mrs. Richard W., 1001 Romany Rd. 64113
 Andrus, Mrs. Bailey C., 6508 Overbrook Rd., Shawnee Mission, Kan. 66208
 Arbab, Mrs. Ali A., 2415 W. 67th, Shawnee Mission, Kan. 66208
 Arms, Mrs. Arnold V., 6421 High Dr., Shawnee Mission, Kan. 66208
 Asher, Mrs. A. Graham, 5410 State Line Rd., Shawnee Mission, Kan. 66208
 Atcheson, Mrs. Bellfield, 6524 Overhill Rd., Shawnee Mission, Kan. 66208
 Atwell, Mrs. Floyd C., 630 W. 60th Terr. 64113
 Bachman, Mrs. Paul L., 1206 W. Truman Rd., Independence 64050
 Baer, Mrs. Alvin J., 5800 Howe Dr., Shawnee Mission, Kan. 66205
 Baker, Mrs. Philip J., 11440 E. 47th St. 64133
 Ball, Mrs. David A., 5307 Mission Woods Rd., Shawnee Mission, Kan. 66205
 Ballard, Mrs. V. Bryce, 6618 Rainbow, Shawnee Mission, Kan. 66208
 Bare, Mrs. Chester I., 10501 E. 78th Terr. 64133
 Barelli, Mrs. Pat A., 5609 Mission Dr., Shawnee Mission, Kan. 66208
 Barker, Mrs. James B., 2314 West 74th, Shawnee Mission, Kan. 66208
 Barloon, Mrs. James H., 612 E. 66th 64131
 Barnard, Mrs. John L., 825 W. 52nd 64112
 Barnett, Mrs. Gordon P., 6568 High Dr., Shawnee Mission, Kan. 66208
 Barr, Mrs. Glenn A., 9615 Grandview Rd. 64137
 Barry, Mrs. John W., 5510 W. 84th, Shawnee Mission, Kan. 66207
 Barry, Mrs. William B., Sulgrave Apts., 122 W. 48th 64112
 Basantz, Mrs. Fernando V., 2025 W. 91st, Shawnee Mission, Kan. 66206
 Bass, Mrs. Walter R., 6415 Sterling 64133
 Bay, Mrs. Merrill R., Woods Chapel Rd., Blue Springs 64015
 Beatty, Mrs. Eugene Carl, 4923 W. 96th Terr., Shawnee Mission, Kan. 66207
 Beck, Mrs. Calvin E., 6432 High Dr., Shawnee Mission, Kan. 66208
 Becker, Mrs. Rolfe A., 6501 Wenonga Rd., Shawnee Mission, Kan. 66208
 Bell, Mrs. William F., 307 Lakeview, Lee's Summit 64063
 Bennett, Mrs. J. D., 3216 W. 69th, Shawnee Mission, Kan. 66208
 Benoit, Mrs. Hector W., Jr., 2501 W. 64th, Shawnee Mission, Kan. 66208
 Bernreiter, Mrs. Michael, 1246 W. 63rd 64113

Berry, Mrs. G. Neill, 5650 High Dr., Shawnee Mission, Kan. 66208
 Berry, Mrs. Maxwell G., 6505 W. 87th, Shawnee Mission, Kan. 66212
 Bickley, Mrs. James E., 2011 West 81st, Shawnee Mission, Kan. 66206
 Biggs, Mrs. Alfred D., Jr., 6551 Wenonga Terr., Shawnee Mission, Kan. 66208
 Bikales, Mrs. Victor W., 5810 High Dr., Prairie Village, Kan. 66208
 Bills, Mrs. Marvin L., 3309 W. 68th, Shawnee Mission, Kan. 66208
 Black, Mrs. Eugene C., 3201 W. 67th, Shawnee Mission, Kan. 66208
 Black, Mrs. Thomas P., 7929 Outlook, Shawnee Mission, Kan. 66208
 Blim, Mrs. Richard Don, 2209 W. 68th, Shawnee Mission, Kan. 66208
 Bohan, Mrs. Peter T., 4545 Wornall Rd. 64111
 Bordy, Mrs. Marvin D., 1911 Romany Rd., Shawnee Mission, Kan. 66208
 Borenstine, Mrs. Joseph, 7307 Holmes 64131
 Borsuk, Mrs. Gregory M., 5121 Oak Leaf Dr. 64129
 Botwin, Mrs. Arnold E., 6010 Cherokee Dr., Shawnee Mission, Kan. 66205
 Bourke, Mrs. Timothy S., 601 E. Meyer Blvd. 64131
 Bowser, Mrs. John F., 3701 Madison 64111
 Boyd, Mrs. George K., 4810 W. 80th, Shawnee Mission, Kan. 66208
 Boyer, Mrs. Philip A., Jr., 9644-B Lydia Ave. 64131
 Boylan, Mrs. Peter C., 6121 W. 90th Terr., Shawnee Mission, Kan. 66207
 Braby, Mrs. Howard, 512 Linwood Terr., Independence 64050
 Brams, Mrs. Jack B., 5050 Oak 64112
 Braverman, Mrs. Abe Elliott, 2701 W. 68th, Shawnee Mission, Kan. 66208
 Brown, Mrs. Adrian J., 12 E. 63rd 64113
 Brown, Mrs. Elwyn S., 200 West 115th 64114
 Brown, Mrs. Menzie H., 9421 Ralston 64134
 Brown, Mrs. William R., 8717 Rosewood Dr., Shawnee Mission, Kan. 66207
 Brumm, Mrs. L. W., 7421 Wyoming 64114
 Bruner, Mrs. Robert, 14909 Little Blue Rd. 64136
 Brust, Mrs. Carl H., 6114 Howe Dr., Shawnee Mission, Kan. 66205
 Buckner, Mrs. Robert C., 3507 W. 87th, Leawood, Kan. 66206
 Budke, Mrs. Harold A., 1219 W. 66th Terr. 64113
 Buhler, Mrs. Victor B., 5212 Bellview 64112
 Buie, Mrs. Bruce R., 4601 E. 110th 64137
 Bunting, Mrs. Williston P., 1231 W. 62nd 64113
 Burry, Mrs. V. Fred, 5213 Scranton Dr. 64133
 Butcher, Mrs. Robert W., 1101 W. 86th Terr. 64114
 Caffrey, Mrs. Raymond J., 1314 W. Red Bridge Rd. 64114
 Caldwell, Mrs. John K., 436 E. 65th Terr. 64131
 Campbell, Mrs. Frederick B., 1032 W. 55th 64113
 Capps, Mrs. Eugene C., 7921 El Monte, Shawnee Mission, Kan. 66208
 Carlson, Mrs. Hjalmar E., 2709 W. 66th, Shawnee Mission, Kan. 66208
 Carmichael, Mrs. Francis A., 5841 High Dr., Shawnee Mission, Kan. 66208
 Caruso, Mrs. Alfred A., 2018 W. 70th Terr. Shawnee Mission, Kan. 66208
 Casady, Mrs. Gilbert N., 9830 Aberdeen Dr., Shawnee Mission, Kan. 66206
 Case, Mrs. William F., 10208 Oak Ridge Dr., Shawnee Mission, Kan. 66212
 Casford, Mrs. Ralph, 1236 W. 72nd 64114
 Chambers, Mrs. James Q., Sr., 600 Admiral 64106
 Chambers, Mrs. James Q., Jr., 5500 Belinder Ave., Shawnee Mission, Kan. 66205
 Chapman, Mrs. James H., 9820 Lee Blvd., Leawood, Kan. 66206
 Childs, Mrs. Richard M., 5325 Mission Woods Terr., Shawnee Mission, Kan. 66206
 Clark, Mrs. Irving H., 2811 Blue Ridge Ext., Grandview 64030
 Cochran, Mrs. Joseph J., 3301 W. 68th, Shawnee Mission, Kan. 66208
 Cockerell, Mrs. Sanford F., 3501 S. Crysler, Independence 64050

Coffey, Mrs. Ralph R., 5211 Wornall Rd.
64112
Cohen, Mrs. Harry K., 417 W. 70th 64113
Cohen, Mrs. Robert Alan, 8226 Cherokee
Circle, Shawnee Mission, Kan. 66206
Colom, Mrs. George A., 4002 W. 56th
Shawnee Mission, Kan. 66205
Coppinger, Mrs. Thomas A., 8 East 55th
Terr. 64113
Cox, Mrs. Kenneth E., 5640 Pembroke La.,
Prairie Village, Kan. 66208
Cox, Mrs. William L., 1465 Spruce Ave.,
Liberty 64068
Culbertson, Mrs. William F., 1253
Huntington Rd. 64113
Curran, Mrs. Desmond, 6626 Wenonga
Terr., Prairie Village, Kan. 66208
Curtis, Mrs. Calvin J., 808 W. 67th Terr.
64131
Dalton, Mrs. Timothy, 11841 Oak 64114
Davidson, Mrs. Ken C., 9700 Wenonga Rd.,
Leawood, Kan. 66206
Davis, Mrs. Donald R., 2501 W. 67th,
Shawnee Mission, Kan. 66208
Davis, Mrs. Herbert V., 4601 Holmes 64110
Davis, Mrs. Jack M., 7110 Harecliff Dr.
64133
Davis, Mrs. Robert C., 659 W. 61st Terr.
64113
Demott, Mrs. John D., 4402 Homestead
Dr., Prairie Village, Kan. 66208
Demotte, Mrs. John A., 1247 W. 56th
64113
Dempsey, Mrs. Herbert A., 806 Chestnut,
Lee's Summit 64063
Dennie, Mrs. Charles C., 2600 Verona Rd.,
Shawnee Mission, Kan. 66208
Dixon, Mrs. V. L., 2501 W. Paseo 64108
Diabab, Mrs. L. J., 3729 Blue Ridge Blvd.,
Independence 64052
Dodge, Mrs. Mark, 5820 State Line Rd.,
Shawnee Mission, Kan. 66208
Dorsch, Mrs. E. H., 3807 Woodland,
Independence 64052
Downey, Mrs. James W., 6218 W. 64th
Terr., Shawnee Mission, Kan. 66202
Drake, Mrs. Roy F., 6600 Outlook, Shawnee
Mission, Kan. 66202
Drisko, Mrs. Robert M., 2100 Stratford Rd.,
Shawnee Mission, Kan. 66208
Dumell, Mrs. Monaford D., 308 Lincoln-
wood Dr., Lee's Summit 64063
Edmonds, Mrs. D. D., 9009 Mission Rd.,
Leawood, Kan. 66206
Eiseman, Mrs. Gustave, 6520 Overhill Rd.,
Shawnee Mission, Kan. 66208
Elias, Mrs. David J., 10311 Sheley Rd.,
Independence 64052
Elliott, Mrs. R. Glen, 6136 Reinhardt Dr.,
Shawnee Mission, Kan. 66205
Engelmann, Mrs. Calvin E., 4916 W. 57th
Terr., Shawnee Mission, Kan. 66205
Eshelman, Mrs. A. D., 12116 E. 46th 64133
Etzenhouser, Mrs. Merrill, 3318 Oxford,
Apt. D., Independence 64052
Etzenhouser, Mrs. Russell D., 1317 W. Col-
lege, Independence 64050
Eubank, Mrs. Dillard M., 6020 Elm 64133
Eubank, Mrs. Will R., 6113 Lane 64133
Eubank, Mrs. William Y., 1020 W. 60th
Terr. 64113
Farley, Mrs. Claude C., 3312 W. 87th,
Leawood, Kan. 66206
Farney, Mrs. Jacob P., 2721 W. 69th
Shawnee Mission, Kan. 66208
Farnsworth, Mrs. Jesse J., 5608 Fairway,
Shawnee Mission, Kan. 66205
Feierabend, Mrs. Frank L., 7345 Wyoming
64114
Ferris, Mrs. Carl R., 629 W. 70th Terr.
64113
Fitzgerald, Mrs. Robert H., 8505 Cherokee
Pl., Shawnee Mission, Kan. 66206
Flanders, Mrs. Horace F., 5161 W. 75th,
Shawnee Mission, Kan. 66208
Flanders, Mrs. Virgil, 2022 W. 91st, Shaw-
nee Mission, Kan. 66206
Flatley, Mrs. John A., 827 Huntington
Rd. 64113
Flynn, Mrs. James F., 5720 High Dr.,
Shawnee Mission, Kan. 66208
Folck, Mrs. William P., 5804 Linden Rd.,
N.W., Parkville 64152
Forsythe, Mrs. Robert W., 6457 Verona Rd.,
Shawnee Mission, Kan. 66208
Fouts, Mrs. Dallas, Sr., 3624 S. Harris,
Independence 64052
Fowler, Mrs. Fred D., 1231 W. 56th 64110

Fowler, Mrs. James, 200 W. 53rd Terr.
64112
Fredeen, Mrs. Robert C., 5437 Canterbury
Rd., Shawnee Mission, Kan. 66205
Frick, Mrs. J. Paul, 116 Huntington Rd.
64113
Friedman, Mrs. Morris L., 2516 W. 69th,
Shawnee Mission, Kan. 66208
Fritzen, Mrs. Thomas J., 825 W. 63rd 64113
Fuhrman, Mrs. Donald L., 3417 W. 68th,
Prairie Village, Kan. 66208
Gaine, Mrs. Harold L., 4907 Sunset Dr.
64112
Galbreath, Mrs. A. M., 8419 W. 89th, Shaw-
nee Mission, Kan. 66212
Ganley, Mrs. Wm. Coyle, 8400 Overhill Dr.
64138
Garner, Mrs. James H., Jr., 8000 Sagamore
Rd., Shawnee Mission, Kan. 66206
Garrison, Mrs. Roy R., 404 W. 67th Terr.
64113
Gauthier, Mrs. Charles P., 11319 Summit
64114
Geha, Mrs. Braham J., 4 Wycklow, Shawnee
Mission, Kan. 66207
Geiger, Mrs. W. A., Jr., 3506 W. 92nd
Terr., Leawood, Kan. 66206
Gibson, Mrs. David M., 5318 Sunset Dr.
64112
Gilkey, Mrs. Harry M., 4941 Westwood Rd.
64112
Gillen, Mrs. Billy A., 6500 Maple Dr.,
Mission, Kan. 66222
Gillmor, Mrs. C. Stewart, 420 E. Armour
64109
Ginsberg, Mrs. Norman A., 1220 W. 67th
64113
Gist, Mrs. W. W., 1230 W. 66th 64113
Goldman, Mrs. Stanley, 5734 Windsor Dr.,
Shawnee Mission, Kan. 66205
Goldsch, Mrs. Edward, 5115 W. 81st,
Prairie Village, Kan. 66208
Goldstein, Mrs. Marvin F., 400 E. 91st
64131
Goodson, Mrs. W. H., Jr., 815 W. 59th
64113
Gordon, Mrs. Morris P., 10527 Walnut Dr.
64114
Gottsch, Mrs. Joseph C., 7904 Granada,
Prairie Village, Kan. 66208
Graham, Mrs. Wallace H., 5157 Ward
Pkwy. 64112
Green, Mrs. John R., 3424 Norton,
Independence 64052
Green, Mrs. John Richard, Jr., 3143 Santa
Fe Terr., Independence 64055
Crowdon, Mrs. John A., 6508 Aberdeen
Rd., Shawnee Mission, Kan. 66208
Gullett, Mrs. Charles C., 8815 W. 72nd
Terr., Shawnee Mission, Kan. 66204
Habib, Mrs. Henry N., 440 E. 74th Terr.
64131
Hager, Mrs. David, 8800 East 62nd 64133
Haigh, Mrs. John M., 5609 Blue Ridge
Blvd. 64133
Hall, Mrs. Ralph R., 10122 Horton Dr.,
Shawnee Mission, Kan. 66207
Halperin, Mrs. Phillip H., 1011 W. 56th
64113
Hamel, Mrs. Herbert A., 6441 High Dr.,
Shawnee Mission, Kan. 66208
Hamtil, Mrs. L. W., 9622 Sagamore, Shaw-
nee Mission, Kan. 66206
Hardy, Mrs. H. M., 6606 Overhill Rd.,
Shawnee Mission, Kan. 66208
Harless, Mrs. Morris S., 6844 Cherry 64131
Harrin, Mrs. William R., 119 W. 116th
64114
Hartwig, Mrs. Fred H., 5204 Pawnee Dr.,
Shawnee Mission, Kan. 66205
Hartwig, Mrs. Raymond W., 3110
Tomahawk, Shawnee Mission, Kan. 66208
Hausheer, Mrs. Herman, 12900 E. 36th
Terr., Independence 64050
Haynes, Mrs. Solon E., 5306 Holmes 64110
Heilman, Mrs. Edward J., 6722 Kenwood
64131
Hellerstein, Mrs. Stanley, 6931 Edgevale Rd.
64113
Helman, Mrs. Richard G., 6540 Wenonga
Rd., Shawnee Mission, Kan. 66208
Herrman, Mrs. George V., Apt. 6, 10855
State Line 64114
Hibbard, Mrs. Blaine Z., 5211 Sunset Dr.
64112
Hickerson, Mrs. William H., 4207 S. Crysler,
Independence 64050
Hill, Mrs. J. H., 8115 Meadow Lane
Leawood, Kan. 66206

Hink, Mrs. Fred W., 524 Hardy, Independ-
ence 64053
Hoadley, Mrs. William D., 9625 Beverly,
Shawnee Mission, Kan. 66212
Hodgson, Mrs. Frank H., 1049 W. 55th
64112
Hoeck, Mrs. George P., Jr., 11724 Central
64114
Hoeper, Mrs. Samuel D., Box 169, Grand-
view 64030
Hollinger, Mrs. Lloyd A., 4520 West 72nd,
Shawnee Mission, Kan. 66208
Hollweg, Mrs. Kenneth C., 808 W. Meyer
Blvd. 64113
Holton, Mrs. Edward B., 2817 Westport
Rd., Independence 64052
Hook, Mrs. Waller G., 10010 Elmonte,
Shawnee Mission, Kan. 66207
Huet, Mrs. Raul, 8632 Juniper La., Shawnee
Mission, Kan. 66207
Hunt, Mrs. Claude J., 615 W. 65th 64113
Hunt, Mrs. Thomas R., 6636 Ensley La.,
Shawnee Mission, Kan. 66208
Hunter, Mrs. Martin P., 4100 W. 93rd,
Shawnee Mission, Kan. 66207
Hunzicker, Mrs. Warren J., 1248 Stratford
Rd. 64113
Huse, Mrs. William Jason II, 8713 Burch
La., Shawnee Mission, Kan. 66207
Ingham, Mrs. Walton C., 9723 Overbrook
Rd., Leawood, Kan. 66206
Irvine, Mrs. John, 2500 Red Bridge Terr.
64131
Irwig, Mrs. Fred, 5109 W. 87th, Shawnee
Mission, Kan. 66207
Ise, Mrs. Frank A., 6700 W. 66th Terr.,
Shawnee Mission, Kan. 66202
Jacob, Mrs. Walter P., 5301 W. 83rd Terr.,
Shawnee Mission, Kan. 66207
Jacobs, Mrs. Morton, 6416 Verona Rd.,
Prairie Village, Kan. 66208
Jacobs, Mrs. Walter Harvey, 6656 Milhaven
Dr., Shawnee Mission, Kan. 66202
James, Mrs. Otis E., Jr., 2810 W. 68th,
Shawnee Mission, Kan. 66208
Janes, Mrs. Donald R., 4502 W. 82nd Terr.,
Shawnee Mission, Kan. 66208
Jansen, Mrs. Robert, 440 E. 66th 64131
Jarvis, Mrs. James A., 600 W. 57th St.
64113
Jenab, Mrs. Morteza, 5964 Overhill Rd.,
Shawnee Mission, Kan. 66208
Johnson, Mrs. Dallas A., 5321 W. 96th
Terr., Shawnee Mission, Kan. 66207
Johnson, Mrs. Joseph, 707 Montcrew Dr.
64114
Johnson, Mrs. Richard L., 9305 Wenonga,
Shawnee Mission, Kan. 66206
Johnstone, Mrs. Paul N., 117 W. 69th Terr.
64113
Jonas, Mrs. Harry S., 11711 Markham Rd.,
Independence 64052
Jones, Mrs. Gale O., 6503 Summit 64113
Jones, Mrs. Samuel T., 9915 Cherokee
Lane, Shawnee Mission, Kan. 66207
Jones, Mrs. T. Reid, 6341 Roe Rul, Shaw-
nee Mission, Kan. 66208
Jung, Mrs. Christopher H., 300 W. Meyer
Blvd. 64113
Justus, Mrs. John B., 5221 Howe Dr.,
Shawnee Mission, Kan. 66205
Kanarek, Mrs. Joseph, 6112 W. 87th Terr.,
Leawood, Kan. 66206
Kandt, Mrs. Ray E., Jr., 8900 Maple Dr.,
Shawnee Mission, Kan. 66207
Kantor, Mrs. Julius M., 6708 High Dr.,
Shawnee Mission, Kan. 66208
Kantor, Mrs. Samuel, 3604 W. 87th,
Leawood, Kan. 66206
Katf, Mrs. Nichola Y., 11812 Central
64114
Kaul, Mrs. Philip G., 5310 Mission Woods
Rd., Shawnee Mission, Kan. 66205
Keeler, Mrs. James E., 422 E. Meyer Blvd.
64131
Kelling, Mrs. Douglas, 7705 West 102nd,
Shawnee Mission, Kan. 66212
Keltner, Mrs. Raymond O., 8900 Pawnee
Lane, Shawnee Mission, Kan. 66206
Kendall, Mrs. Charles A., 604 Red Rd., In-
dependence 64055
Kennard, Mrs. G. Keith, 3658 Madison
64111
Kent, Mrs. Bela, 5839 Cherokee Dr.,
Shawnee Mission, Kan. 66205
Kettner, Mrs. Edward G., 6510 Milhaven
Dr., Shawnee Mission, Kan. 66202
Kiene, Mrs. Richard H., 6429 Overbrook
Rd., Shawnee Mission, Kan. 66208

- Kindred, Mrs. Lynn H., 4606 West 82nd Terr., Shawnee Mission, Kan. 66208
 Kitchen, Mrs. W. M., 2700 W. 68th, Shawnee Mission, Kan. 66208
 Klein, Mrs. E. H., 7011 Roe, Prairie Village, Kan. 66208
 Knight, Mrs. John S., 5800 High Dr., Shawnee Mission, Kan. 66208
 Knight, Mrs. Lyle B., 108 Madison La., Lee's Summit 64063
 Knoch, Mrs. H. Kermit, 6606 Willow La., Shawnee Mission, Kan. 66208
 Koontz, Mrs. Paul C., 301 W. 54th 64112
 Kranson, Mrs. Seymour J., 11 Hawthorne Pl., Independence 64052
 Krueger, Mrs. Haven, 3608 W. 83rd Terr., Shawnee Mission, Kan. 66206
 Kuruvilla, Mrs. George, 9628 Shepherds Dr., The News 64131
 Kyger, Mrs. John E., 3612 Blue Ridge, Independence 64052
 Lamar, Mrs. Frederick C., 803 W. 48th, Apt. 12, 64112
 Lamar, Mrs. Robert F., 800 W. 53rd Terr. 64112
 Lambie, Mrs. Rodger W., 10317 Grant La., Shawnee Mission, Kan. 66212
 Lampton, Mrs. Lawrence, 5516 Wyandotte 64113
 Landis, Mrs. George K., 10115 Pawnee La., Shawnee Mission, Kan. 66206
 Lanning, Mrs. Richard J., 213 W. Greentree Lane 64116
 Lapp, Mrs. Harry C., 221 W. 51st 64112
 Latham, Mrs. Raymond W., 3008 W. 67th, Shawnee Mission, Kan. 66208
 Lauer, Mrs. Daniel J., 8718 Cherokee Lane, Leawood, Kan. 66206
 Layle, Mrs. John K., 5500 Chadwick, Shawnee Mission, Kan. 66205
 Layton, Mrs. Ira C., 1025 Greenway Terr. 64113
 Lee, Mrs. Henry A., 9821 Sagamore Rd., Shawnee Mission, Kan. 66206
 Lee, Mrs. King Y., 10811 W. 100 St. Terr., Shawnee Mission, Kan. 66214
 Leitch, Mrs. Cecil G., Route 2, Box 222, Blue Springs 64015
 Lemoine, Mrs. Albert N., Sr., 9200 High Dr., Leawood, Kan. 66206
 Lentz, Mrs. Clark H., 2600 West 69th, Shawnee Mission, Kan. 66208
 Leo, Mrs. William A., 4505 W. 66th, Prairie Village, Kan. 66208
 Lewis, Mrs. Revis C., 1001 W. 56th 64113
 Lichter, Mrs. Joseph M., 2109 W. 70th, Prairie Village, Kan. 66208
 Lieberman, Mrs. B. Albert, Jr., 1229 W. 67th 64113
 Lindgren, Mrs. Charleton J., 12805 East 38th, Independence 64055
 Link, Mrs. Vance E., 1201 W. 36th, Independence 64050
 Littlejohn, Mrs. Robert, 5215 W. 63rd Terr., Shawnee Mission, Kan. 66208
 Long, Mrs. R. Stacy, 3343 Blue Ridge Blvd., Independence 64052
 Loutzenhizer, Mrs. James K., 404 E. 74th 64131
 Lowell, Mrs. Paul, 4742 Liberty 64112
 Lytton, Mrs. George J., 617 W. 49th 64112
 Mahen, Mrs. Sam, 8904 East 66th 64133
 Maccubbin, Mrs. Don A., 4820 W. 81st, Shawnee Mission, Kan. 66208
 MacGee, Mrs. Edwin E., 7525 Colonial Dr., Shawnee Mission, Kan. 66208
 Macnaughton, Mrs. Ralph E., 7317 High Dr., Shawnee Mission, Kan. 66208
 Mangels, Mrs. Kenneth A., Sr., 1103 W. 36th Terr., Independence 64050
 Mantz, Mrs. Herbert L., 1209 Romany Rd. 64113
 Marks, Mrs. Mark M., 6537 Summit 64113
 Martin, Mrs. Clyde V., 5531 E. Mission Dr., Shawnee Mission, Kan. 66208
 Martin, Mrs. Daniel C., 5611 W. 92nd Terr., Shawnee Mission, Kan. 66207
 Mason, Mrs. Wayne, 53 E. 107th 64114
 Masucci, Mrs. Joseph M., 1012 W. 96th Terr. 64114
 Mayer, Mrs. John H., Jr., 5739 Windsor Dr., Shawnee Mission, Kan. 66205
 McCallister, Mrs. Ben D., 6431 Norwood, Shawnee Mission, Kan. 66208
 McCause, Mrs. Andrew, 1232 W. 60th Terr. 64113
 McClanahan, Mrs. Robert C., 6456 Overbrook Rd., Shawnee Mission, Kan. 66208
 McConchie, Mrs. James E., 12903 E. 35th Terr., Independence 64055
 McCray, Mrs. Glen, 3715 Johnson Dr., Shawnee Mission, Kan. 66205
 McDonnell, Mrs. John F., 5411 Central 64112
 McFarland, Mrs. M. Donald, 5830 High Dr., Shawnee Mission, Kan. 66208
 McIntosh, Mrs. Donald E., 12709 Oakmont Dr. 64145
 McKee, Mrs. Joseph W., Apt. 211, 4202 West 94th Terr., Shawnee Mission, Kan. 66207
 McKee, Mrs. Wallace P., 2020 Stratford Rd., Shawnee Mission, Kan. 66208
 McNelly, Mrs. W. V., Jr., 7228 Hadley, Shawnee Mission, Kan. 66204
 McMillan, Mrs. Thomas E., 8201 Dearborn, Shawnee Mission, Kan. 66208
 McVay, Mrs. James R., Jr., 1233 W. 63rd Terr. 64113
 Medlicott, Mrs. William J., 1260 W. 59th 64113
 Melgaard, Mrs. S. Ross, 1012 W. 61st Terr. 64113
 Meyer, Mrs. Paul W., 5160 Sunset Dr. 64112
 Meyers, Mrs. Harold L., 1901 Brookwood Rd., Shawnee Mission, Kan. 66208
 Miles, Mrs. George O., 2231 W. 63rd, Shawnee Mission, Kan. 66208
 Miller, Mrs. Clint L., 211 Oxford Dr., Lee's Summit 64063
 Miller, Mrs. Gerald L., 836 W. 51st 64112
 Miller, Mrs. Max I., 4001 W. 66th St., Prairie Village, Kan. 66208
 Miller, Mrs. Wilson Herrick, 6400 Verona Rd., Shawnee Mission, Kan. 66208
 Mitchell, Mrs. John D., 6104 Lockton La., Shawnee Mission, Kan. 66205
 Mitra, Mrs. Nirmal, 2007 W. 81st Terr., Leawood, Kan. 66206
 Mixson, Mrs. William C., 6501 Sagamore Rd., Shawnee Mission, Kan. 66208
 Montello, Mrs. Samuel A., 4109 Delmar Dr., Prairie Village, Kan. 66208
 Mooney, Mrs. Justin L., 6909 W. 51st Pl., Shawnee Mission, Kan. 66202
 Mooney, Mrs. Marcel L., 6439 Ensley La., Prairie Village, Kan. 66208
 Moore, Mrs. Robert A., 10818 W. 102nd, Shawnee Mission, Kan. 66214
 Moreano, Mrs. Armando H., 3920 W. 57 Terr., Shawnee Mission, Kan. 66205
 Morgan, Mrs. David B., 6513 Jefferson 64113
 Morris, Mrs. Joseph H., 5017 George 64133
 Morrow, Mrs. Raymond L., 17 W. 69th 64113
 Moss, Mrs. Paul, 8701 Walmer, Shawnee Mission, Kan. 66212
 Mosser, Mrs. Robert S., 3114 S. Norton, Independence 64052
 Mueller, Mrs. M. J., 11723 Central 64114
 Mullen, Mrs. Leo M., 1900 West 68th, Shawnee Mission, Kan. 66208
 Murphy, Mrs. Edward S., 421 West 68th 64113
 Murphy, Mrs. Robert J., 6428 High Dr., Shawnee Mission, Kan. 66208
 Murray, Mrs. W. Lee, 10330 Ash, Shawnee Mission, Kan. 66207
 Naime, Mrs. Mansour J., 9625 Linden Dr., Shawnee Mission, Kan. 66207
 Needels, Mrs. Orval T., 207 W. 67th Terr. 64113
 Nelson, Mrs. Bentley A., 6429 Willow La., Shawnee Mission, Kan. 66208
 Nesselrode, Mrs. John H., 12000 Marbec Trail, Independence 64052
 Newman, Mrs. Robert L., 1601 Mews Dr. 64131
 Nickson, Mrs. Charles E., Jr., 4425 Larson 64133
 Nigro, Mrs. E. Robert, 415 W. 55th 64113
 Noback, Mrs. R. K., 628 W. 67th 64113
 Noltensmeyer, Mrs. Milton, 3305 S. 50th Terr., Shawnee Mission, Kan. 66205
 O'Hearne, Mrs. John J., 5529 High Dr., Shawnee Mission, Kan. 66208
 O'Neil, Mrs. James H., 2111 W. 69th Terr., Shawnee Mission, Kan. 66208
 Osborne, Mrs. Jere O., 644 W. 69th Terr. 64113
 Overesch, Mrs. Harry B., 10804 Grandview Rd. 64137
 Ozar, Mrs. Milton B., 1206 W. 62nd 64113
 Padfield, Mrs. Earl G., 1900 W. 61st Terr., Shawnee Mission, Kan. 66208
 Pakula, Mrs. Sidney F., 333 W. Meyer 64113
 Parker, Mrs. Hubert M., 1200 W. Red Bridge Rd. 64114
 Pearson, Mrs. Paul, 5820 Howe Dr., Shawnee Mission, Kan. 66205
 Peete, Mrs. Don Carlos, 3717 Bellevue 64111
 Penner, Mrs. Stanley, 901 West 101st Terr. 64114
 Perico, Mrs. Carlos, 8446 Juniper, Shawnee Mission, Kan. 66207
 Perill, Mrs. Maurice F., 830 W. 61st Terr., 64113
 Perry, Mrs. Ralph, 7140 Sni-A-Bar Rd. 64129
 Petersen, Mrs. George, 4806 W. 68th, Shawnee Mission, Kan. 66208
 Pfeutze, Mrs. Edwin L., 5407 W. 100th Terr., Shawnee Mission, Kan. 66207
 Piper, Mrs. Donald K., 9929 High Dr., Shawnee Mission, Kan. 66206
 Pipkin, Mrs. Garrett, 5427 Baltimore 64112
 Pollock, Mrs. Leo H., 6601 Wenonga Terr., Shawnee Mission, Kan. 66208
 Pope, Mrs. Charles H., Jr., 14401 E. 44th, Independence 64055
 Porter, Mrs. Louis, 6017 McGee 64113
 Potts, Mrs. Donald, 18508 E. 30th Terr., Independence 64050
 Powell, Mrs. Nelson E., 9521 Linden, Shawnee Mission, Kan. 66207
 Preston, Mrs. Albert, Jr., 606 W. Meyer Blvd. 64113
 Printz, Mrs. Joseph H., 820 W. 64th Terr. 64113
 Pugh, Mrs. Richard George, 102 Golfview Dr., Blue Springs 64015
 Puls, Mrs. Jerry L., 10100 Glenwood, Shawnee Mission, Kan. 66212
 Quer, Mrs. Erich A., 1901 Stratford Rd., Shawnee Mission, Kan. 66208
 Raich, Mrs. Robert A., 828 Greenway Terr. 64113
 Ramey, Mrs. Ehret O., 8108 Ward Parkway Plaza 64114
 Rector, Mrs. Joe Lee, Jr., 3915 W. 53rd, Shawnee Mission, Kan. 66205
 Reinhardt, Mrs. G. Robert, 1201 Romany Rd. 64113
 Rhoades, Mrs. Arthur, 111 E. Antioch Rd., Box 292, Lenexa, Kan. 66215
 Riller, Mrs. L. E., 1267 W. 61st 64113
 Rinck, Mrs. William E., 5933 Rockhill Rd. 64110
 Rinkel, Mrs. Herbert J., 936 Coast Blvd., La Jolla, Calif. 92037
 Rippey, Mrs. John H., 6551 Wenonga Rd., Shawnee Mission, Kan. 66208
 Roberts, Mrs. Harold M., 1005 Brentwood Cir. 64112
 Roberts, Mrs. Sam E., 4550 Warwick Blvd. 64111
 Robinson, Mrs. Arthur W., 6600 Wenonga Rd., Shawnee Mission, Kan. 66208
 Robinson, Mrs. Ernest Kip, 1015 W. 58th Terr. 64113
 Robinson, Mrs. William J., 9931 Lee Cir., Shawnee Mission, Kan. 66206
 Robison, Mrs. James Travis, Jr., 4203 W. 92nd Terr., Shawnee Mission, Kan. 66207
 Rodgers, Mrs. George H., 10041 El Monte La., Shawnee Mission, Kan. 66207
 Rozen, Mrs. Jay Irving, 9520 Linden, Shawnee Mission, Kan. 66207
 Rubin, Mrs. Sidney, 1287 W. 72nd 64114
 Rubnitz, Mrs. Leon H., 210 W. 94th 64114
 Russell, Mrs. James L., 1250 W. 56th 64113
 Sabates, Mrs. Felix, 1250 W. 67th Terr. 64113
 Saferstein, Mrs. A. Lester, 6859 Cherry 64131
 Sanders, Mrs. Clarence E., 4700 Roanoke Pkwy. 64112
 Sanders, Mrs. Donald, 11721 Oak 64114
 Sanders, Mrs. William F., 1004 W. 66th Terr. 64113
 Sasano, Mrs. J. Richard, 4508 W. 93rd, Shawnee Mission, Kan. 66207
 Sauer, Mrs. Gordon C., 830 W. 58th Terr. 64113
 Schaererr, Mrs. W. C., 5245 Mercier 64112
 Schiffmacher, Mrs. Jack E., 4517 W. 65th, Prairie Village, Kan. 66208
 Schillie, Mrs. Gene A., 8232 Linden, Shawnee Mission, Kan. 66208
 Schmidt, Mrs. C. Robert, 9526 Cedar, Shawnee Mission, Kan. 66205
 Schoolman, Mrs. Arnold, 8705 Catalina Dr., Shawnee Mission, Kan. 66207

Schottman, Mrs. Gerhard W., Jr., 5010 W. 96th Terr., Shawnee Mission, Kan. 66207
Seely, Mrs. Clark W., 3000 W. 68th St., Shawnee Mission, Kan. 66208
Sells, Mrs. Kenneth J., 3606 Gillham Rd. 64109
Shalet, Mrs. Malcolm F., 9920 Juniper, Shawnee Mission, Kan. 66201
Shapiro, Mrs. L. M., 6429 Holmes 64131
Sheahon, Mrs. J. A., 7211 Richmond 64133
Shelden, Mrs. Russell D., 816 W. 58th Terr. 64113
Shiffrin, Mrs. Alexander, 1027 W. 69th Terr. 64113
Shireman, Mrs. Kenneth L., Noland Rd. & 55th Terr., R.R. 3, 64133
Shockley, Mrs. Clarence, 5927 McGee 64113
Shuey, Mrs. Herbert H., 933 E. 77th Terr. 64131
Shumate, Mrs. D. L., 3703 Penn 64111
Simon, Mrs. Sanford, 8129 Rosewood, Shawnee Mission, Kan. 66208
Sinclair, Mrs. Alexander B., Jr., 1230 W. 61st Terr. 64113
Singleton, Mrs. J. Milton, 4618 Warwick Blvd. 64112
Skillman, Mrs. Robert K., 10335 High Dr., Shawnee Mission, Kan. 66206
Skinner, Mrs. John T., 824 Westover Rd. 64113
Slentz, Mrs. Edwin L., 4812 W. 66th Terr., Shawnee Mission, Kan. 66208
Slentz, Mrs. William A., 9835 Pembroke Lane, Shawnee Mission, Kan. 66206
Slickman, Mrs. Robert A., 4937 Wyoming 64112
Smith, Mrs. Arthur B., 8409 Wenonga Rd., Shawnee Mission, Kan. 66206
Smith, Mrs. Ira T., 2 Wycklow, Shawnee Mission, Kan. 66207
Smith, Mrs. Wallace B., 3611 S. Delaware, Independence 64050
Sneid, Mrs. Philip, 4201 W. 90th Terr., Shawnee Mission, Kan. 66207
Snider, Mrs. Sam H., 404 Wesley Dr., Chapel Hill, N. C. 27514
Snider, Mrs. W. Ray, 10700 East 56th Terr. 64133
Spafford, Mrs. Allen L., 5552 Belinder Ave., Shawnee Mission, Kan. 66205
Spalding, Mrs. Wilbur B., Jr., 6206 Robinson, Shawnee Mission, Kan. 66202
Spencer, Mrs. Donald M., 10200 E. 85th Terr., Raytown 64133
Spurny, Mrs. Otto M., 6400 Cherry 64131
Stacey, Mrs. Wallace R., 3407 Shady Bend Dr., Independence 64052
Staggs, Mrs. William A., 641 E. 45th St. 64110
Staley, Mrs. Harry R., 4740 Roanoke Pkwy. 64112
Statland, Mrs. Harry, 1016 W. 69th Terr. 64113
Statland, Mrs. Morris, 2911 W. 66th Terr., Shawnee Mission, Kan. 66208
Steffen, Mrs. L. F., 5521 Crestwood Dr. 64110
Stelmach, Mrs. W. Jack, 4303 W. 93rd Terr., Prairie Village, Kan. 66208
Stephens, Mrs. Jack D., 18110 E. 27th, Independence 64057
Stockton, Mrs. Raymond W., 5215 W. 81st, Prairie Village, Kan. 66208
Stockwell, Mrs. A. Lloyd, 5736 Windsor Dr., Shawnee Mission, Kan. 66205
Stribling, Mrs. Thomas L., 3808 S. Union, Independence 64055
Summers, Mrs. Caldwell B., 7312 Jarboe 64114
Sutton, Mrs. Richard L., Jr., 5400 Ward Pkwy. 64112
Szabados, Mrs. Ernest D., 1901 S. Leslie, Independence 64050
Tarson, Mrs. Solomon S., 5511 W. 85th, Shawnee Mission, Kan. 66207
Tasker, Mrs. Charles B., 2721 W. 67th Terr., Shawnee Mission, Kan. 66208
Teare, Mrs. Max, 11201 Walnut 64114
Terrill, Mrs. Robert, 10223 Lee Blvd., Shawnee Mission, Kan. 66206
Thiele, Mrs. George H., 4545 Wornall 64111
Thomas, Mrs. Christopher Y., Jr., 5830 Mission Dr., Shawnee Mission, Kan. 66208
Tice, Mrs. Wayne K., 3504 S. Delaware, Independence 64050
Tillema, Mrs. David A., 10235 Conser, Shawnee Mission, Kan. 66212

Totten, Mrs. Frederick E., 9331 Hayes Dr., Shawnee Mission, Kan. 66212
Toubes, Mrs. Daniel, 1610 Meadow Lake Terr. 64114
Trippie, Mrs. Harrison C., 5519 Rockhill Rd. 64110
Troeh, Mrs. Richard, 13000 Delaware Dr., Independence 64055
Trowbridge, Mrs. E. H., Jr., 6436 High Dr., Shawnee Mission, Kan. 66208
Tutera, Mrs. D. F., 1260 W. 63rd Terr. 64113
Twin, Mrs. Edward, 8208 Tomahawk, Shawnee Mission, Kan. 66208
Twyman, Mrs. Richard A., 1020 W. 56th 64113
Underwood, Mrs. Dick Holland, 9828 Belinder, Shawnee Mission, Kan. 66206
Unger, Mrs. Harold, 221 W. 48th 64112
Valins, Mrs. Eugene, 1209 W. 70th Terr. 64113
Van Biber, Mrs. James T., 3705 Northern Blvd., Independence 64052
Vaughn, Mrs. James W., 5509 W. 86th, Shawnee Mission, Kan. 66207
Vidal, Mrs. Guillermo, 9509 West 104th Terr., Shawnee Mission, Kan. 66212
Vilmer, Mrs. Charles E., 6209 W. 65th, Shawnee Mission, Kan. 66202
Vincent, Mrs. Jack C., 2003 W. 67th Terr., Shawnee Mission, Kan. 66208
Virden, Mrs. Herbert H., 6533 High Dr., Shawnee Mission, Kan. 66208
Vogel, Mrs. Arthur P., 6524 Willow La., Shawnee Mission, Kan. 66208
Voth, Mrs. Harold W., 5413 Neosho, Shawnee Mission, Kan. 66205
Wade, Mrs. Frederick E., 413 W. 62nd 64113
Wagner, Mrs. Paul J., Greenwillow Farm Route 1, Greenwood 64034
Walker, Mrs. James C., 609 E. 96th 64131
Walker, Mrs. John W., 10336 Mohawk Lane, Shawnee Mission, Kan. 66206
Walker, Mrs. Orville C., Jr., 604 Partridge, Independence 64050
Wall, Mrs. Leonard A., 5011 Neosho Ave., Shawnee Mission, Kan. 66205
Waltz, Mrs. Charles, 504 Wedgewood Dr., Blue Springs 64015
Waltz, Mrs. James R., RFD #5, Box 202, Lee's Summit 64063
Waxman, Mrs. Herbert, 2012 West 81st, Shawnee Mission, Kan. 66206
Webster, Mrs. Joseph G., 5532 Locust 64110
Weiford, Mrs. Edward C., 2009 W. 68th, Shawnee Mission, Kan. 66208
Weir, Mrs. Robert K., 10015 E. 36th, Independence 64052
Wenner, Mrs. Herbert A., 9711 Johnson Dr., Shawnee Mission, Kan. 66203
Wheeler, Mrs. Charles B., 820 W. 57th 64113
Wheeler, Mrs. John H., 5650 Mission Dr., Shawnee Mission, Kan. 66208
White, Mrs. Charles H., 6518 Overhill Rd., Prairie Village, Kan. 66208
White, Mrs. James S., 5413 Cleveland 64130
White, Mrs. Stoughton F., 6815 Cherokee La., Shawnee Mission, Kan. 66208
White, Mrs. William E., 6015 State Line 64113
Whiteman, Mrs. John R., 9729 Cherokee La., Leawood, Kan. 66206
Whitman, Mrs. Doyle C., 6836 Cherokee La., Shawnee Mission, Kan. 66208
Whitmore, Mrs. J. Stewart, 1039 W. 58th St. 64113
Whittaker, Mrs. C. Keith, 1225 W. 64th 64113
Wicks, Mrs. Edwin O., 506 N. W. 43rd Terr. 64116
Wilber, Mrs. Robert D., 6624 Willow Lane, Shawnee Mission, Kan. 66208
Wilhelm, Mrs. Warren F., 3100 W. 67th, Shawnee Mission, Kan. 66208
Wilkinson, Mrs. Charles B., 4604 Benton Blvd. 64130
Wilkinson, Mrs. E. A., 6810 Linden La., Prairie Village, Kan. 66208
Williams, Mrs. Delon Acree, 4805 Jarboe 64112
Williams, Mrs. Frank, 5921 Ward Pkwy. 64113
Williams, Mrs. Joseph C., Jr., 2209 Arno Rd., Shawnee Mission, Kan. 66202
Williams, Mrs. Roland Dean, 3635 Belleview 64111

Williams, Mrs. Thomas A., 9601 Manor Rd., Shawnee Mission, Kan. 66206
Willits, Mrs. Lyle G., 1224 W. 62nd 64113
Willoughby, Mrs. James W., 420 N. Ridge, Liberty 64068
Willoughby, Mrs. Jean B., 1019 W. 69th Terr. 64113
Wilson, Mrs. Brickhouse, 700 Ward Pkwy. 64112
Wilson, Mrs. Clifford C., 5531 Neosho La., Shawnee Mission, Kan. 66205
Winer, Mrs. Herbert J., 2103 W. 69th Terr., Shawnee Mission, Kan. 66208
Winston, Mrs. Bernard H., 1006 W. 67th 64113
Wolf, Mrs. Jack, 6125 Morningside Dr. 64113
Woods, Mrs. S. Dwight, 3408 W. 69th, Shawnee Mission, Kan. 66208
Woods, Mrs. Walton C., 9004 East 73rd 64133
Woodward, Mrs. William W., 3610 So. Delaware, Independence 64050
Workman, Mrs. Charles E., 6609 Milhaven Dr., Shawnee Mission, Kan. 66202
Wortmann, Mrs. Robert F., 2819 W. 66th Terr., Shawnee Mission, Kan. 66208
Wright, Mrs. R. Paul, 4902 Belinder Rd., Shawnee Mission, Kan. 66206
Wu, Mrs. William, 4414 Homestead Dr., Prairie Village, Kan. 66208
Wurster, Mrs. Jerry B., 5746 W. 97th, Shawnee Mission, Kan. 66207
Wurster, Mrs. W. Joel, 2015 Drury La., Shawnee Mission, Kan. 66208
Youll, Mrs. Donald V., 8711 Ensley La., Shawnee Mission, Kan. 66206
Young, Mrs. James E., 9700 Overbrook Rd., Leawood, Kan. 66206
Young, Mrs. J. W., 5443 Mohawk, Shawnee Mission, Kan. 66205
Young, Mrs. Paul R., 7424 Gregory Cir., 64113
Youngblood, Mrs. James, 1209 W. 58th 64113
Zacharias, Mrs. David L., 7819 N. W. Westside Dr. 64152
Zahoney, Mrs. Ivan, 4409 W. 93rd, Shawnee Mission, Kan. 66207
Zoglin, Mrs. Nathan, 333 W. Meyer Blvd. 64113

JASPER COUNTY (Joplin)

Adams, Mrs. Robert, 1302 Mississippi 64801
Allen, Mrs. David O., Route 4, Box 85 64801
Alquist, Mrs. Dale, 21st & Fairview, Baxter Springs, Kan. 66713
Barnett, Mrs. Norman H., Route 3, Box 271 64801
Bentlage, Mrs. Charles H., 1304 Fairmont Dr. 64801
Birsner, Mrs. Frank, 1717 River, Carthage 64836
Bladow, Mrs. Terrence, 2703 Missouri 64801
Burch, Mrs. John E., 1345 Crest Dr., 64801
Butler, Mrs. Patrick, 219 Sergeant 64801
Carnes, Mrs. Victor, 710 N. Sergeant 64801
Chase, Mrs. Ned B., 2931 Indiana 64801
Chesney, Mrs. George W., Jr., 2416 E. 12th 64801
Cohle, Mrs. Richard, 1609 Lilac La., Carthage 64836
Craig, Mrs. Irwin T., 2525 E. 12th 64801
Crawford, Mrs. A. L., 2931 Pearl Ave. 64801
Crispell, Mrs. Lawrence S., 911 Kensington 64801
Curl, Mrs. Howard, 2031½ Pearl 64801
Detar, Mrs. Burleigh, Sr., 410 Jackson 64801
Esther, Mrs. John R., 612 Glenview 64801
Ferguson, Mrs. Lewis H., 604 Plaza Dr. 64801
Ferguson, Mrs. Ralph, 420 E. 33rd 64801
Ferguson, Mrs. Robert M., 2319 East 10th 64801
Fritsch, Mrs. Andrew J., 2920 Pearl 64801
Gaston, Mrs. Samuel, 2720 Ohio 64801
Hallaba, Mrs. Moheb A. S., 808 Hampton Pl. 64801
Hamilton, Mrs. Eugene, 2736 East 15th 64801
Isbell, Mrs. C. H., 1046 S. Garrison, Carthage 64836
Jeans, Mrs. Virgil, 629 Islington Pl. 64801

Kirschman, Mrs. Robert E., Route 4, Box 359 64801
 Koehler, Mrs. John W., 1001 Manitou 64801
 Longenecker, Mrs. J. L., 2606 E. 14th 64801
 MacLaughlin, Mrs. James C., 2414 Wisconsin 64801
 Maddox, Mrs. John D., 1330 Crest Dr. 64801
 McKee, Mrs. Howard, 1925 Moffett 64801
 McNew, Mrs. W. T., 1204 S. Main, Carthage 64836
 McPike, Mrs. Lloyd H., 2217 Brownell 64801
 Papp, Mrs. Sandor D., 3343 Pearl 64801
 Patterson, Mrs. Donald R., Route 1, Box 481 64801
 Patterson, Mrs. Grover S., 1717 River, Carthage 64836
 Post, Mrs. Winfred L., 2630 E. 15th 64801
 Powell, Mrs. Robert G., 818 Galena Ave., Galena, Kan. 66739
 Roberts, Mrs. Howard H., 650 Jaccard Pl. 64801
 Schmidt, Mrs. Herbert J., 820 N. Moffet 64801
 Schoeberl, Mrs. C. B., 3111 E. 4th 64801
 Schulte, Mrs. Gregory A., 2515 E. 12th 64801
 Scorese, Mrs. S. W., 619 W. 2nd 64801
 Smith, Mrs. Roland T., 426 N. Pearl 64801
 Smith, Mrs. Russell W., 315 Euclid, Carthage 64836
 Upsher, Mrs. Albert E., 69 Canterbury Lane 64801
 Walker, Mrs. Paul, 1022 N. Sergeant 64801
 Warrender, Mrs. Charles, 505 W. 34th 64801
 Wieman, Mrs. Harry K., 636 N. Wall 64801
 Wood, Mrs. George H., 530 E. Highland, Carthage 64836
 Wooldridge, Mrs. Bart F., 1435 Crest Dr. 64801
 Young, Mrs. C. C., 2518 E. 13th 64801

JEFFERSON COUNTY

Carroll, Mrs. Richard C., Crystal Hts. Rd., Crystal City 63019
 Deles, Mrs. Vincente, Crystal City 63019
 Donnell, Mrs. Harold, De Soto 63020
 Ibaviosa, Mrs. Alfred, Festus 63028
 Judge, Mrs. Thomas, Crystal City 63019
 Kozal, Mrs. Frank, Crystal City 63019
 McKinstry, Mrs. Karl, De Soto 63020

**JOHNSON COUNTY
(Warrensburg 64093)**

Cada, Mrs. Edward, 901 E. Clark
 Cooper, Mrs. R. Lee, Route 1
 Cooper, Mrs. Robert L., II, 310 Johnson Dr.
 Damron, Mrs. O. H., 612 N. Maguire
 Folkner, Mrs. Albert L., Route 1
 Hanna, Mrs. Hugh, Route 5
 Harkness, Mrs. Harry H., Burkarth Rd.
 Johnson, Mrs. Charles S., 502 Hurricane Hill
 Jones, Mrs. Keith D., 910 E. Clark
 Lederer, Mrs. Charles M., 617 Clark
 Maxson, Mrs. R. Reed, Arlen Acres

LAFAYETTE-RAY COUNTIES

Boydston, Mrs. Wayne, Odessa 64076
 Brady, Mrs. Hugh, Concordia 64020
 Brasher, Mrs. Ben H., Lexington 64067
 Cook, Mrs. Edna, Richmond 64085
 Cook, Mrs. Thos. B., Richmond 64085
 Cope, Mrs. Joseph S., Lexington 64067
 Crozier, Mrs. Frank, Sr., Route 2, Richmond 64085
 Davault, Mrs. George, Richmond 64085
 Johnston, Mrs. Esther, Concordia 64020
 Kelling, Mrs. Jordan, Waverly 64096
 Koppenbrink, Mrs. W. E., Jr., Higginsville 64037
 Koppenbrink, Mrs. W. E., Sr., Higginsville 64037
 Liston, Mrs. Odis, Oak Grove 64075
 Martin, Mrs. W. E., Odessa 64076
 Pavlu, Mrs. Robert R., 14 W. 13th, Carrollton 64633
 Riley, Mrs. Charles, Route 2, Richmond 64085
 Vajaranant, Mrs. Mani, N. 17th, Lexington 64067
 Ward, Mrs. Joe W., Lexington 64067
 Williams, Mrs. John, Oak Grove 64075

MILLER-MONITEAU-MORGAN

Buehler, Mrs. Carl T., Jr., Eldon 65026
 Burke, Mrs. J. P., California 65018
 Fulks, Mrs. Richard B., California 65018
 Gallagher, Mrs. Lionel M., California 65018
 Gunn, Mrs. Jack, Versailles 65084
 Hall, Mrs. C. Robert, 306 N. Van Buren, Versailles 65084
 Latham, Mrs. Kenyon, 200 S. High, California 65018
 Lyle, Mrs. Ray, Versailles 65084
 Shelton, Mrs. E. O., Eldon 65026
 Washburn, Mrs. J. L., Versailles 65084

MINERAL AREA**(St. Francois-Iron-Madison-Washington-Reynolds-St. Genevieve Counties)**

Appleberry, Mrs. Charles H., 706 W. Main, Flat River 63601
 Chastain, Mrs. C. W., Highway F, Farmington 63640
 Crouch, Mrs. F. Richard, 714 Ste. Genevieve, Farmington 63640
 Dennis, Mrs. Paul, 709 Tyler, Flat River 63601
 Fraser, Mrs. R. A., 334 Church, Bonne Terre 63628
 Hardy, Mrs. Stanton, 406 N. Harding, Desloge 63601
 Huckstep, Mrs. Robert A., Route 1, Farmington 63640
 Hunt, Mrs. John W., 8 Hootor Dr., Farmington 63640
 Mardini, Mrs. Edward, 140 Church, Bonne Terre 63628
 Mullen, Mrs. Jack, Route 2, Bonne Terre 63628
 Taylor, Mrs. Van, 54 Church, Bonne Terre 63628
 Turner, Mrs. Kirby, Potosi 63664

**PETTIS COUNTY
(Sedalia 65301)**

Block, Mrs. Jerome E., 807 Ruth Ann Dr.
 Boger, Mrs. John W., 2803 Skyline Dr.
 Braverman, Mrs. Elliot M., Route 3, Walnut Hills
 Brazos, Mrs. John, Route 2
 Campbell, Mrs. Albert J., 1500 W. 16th
 Cole, Mrs. William R., RFD 1, Smithton 65350
 Edmonds, Mrs. Robert, 2413 S. Stewart
 Edwards, Mrs. David R., 1619 S. Moniteau
 Eldenburg, Mrs. Donald, Route 2
 Erickson, Mrs. H. John, 2510 Wing Ave.
 Fisher, Mrs. Stanley D., 2200 S. Kentucky
 Glass, Mrs. Robert L., 720 S. Beacon
 Gonser, Mrs. Karl B., 1619 W. Broadway
 Hite, Mrs. H. A., 416 S. Grand
 Hopkins, Mrs. Thomas J., 1506 W. Broadway
 Lamy, Mrs. John E., 509 W. Broadway
 Long, Mrs. Frank B., 723 W. 7th
 Owens, Mrs. John H., 2616 Plaza
 Proctor, Mrs. Donald C., 717 W. 6th
 Roberts, Mrs. Paul A., 101 E. Marshall, Sweet Springs 65351
 Stauffacher, Mrs. Gordon C., 1313 W. Broadway
 Stewart, Mrs. Robert H., 201 Driftwood Dr.
 Stockwood, Mrs. Robert C., 2600 S. Quincy
 Van Dyke, Mrs. Elmer, Route 4, Box 91A
 Worley, Mrs. C. A., 102 W. Ray, Sweet Springs 65351

**ST. CHARLES-LINCOLN COUNTIES
(St. Charles 63301)**

Baird, Mrs. Keim L., 16 Warwick Ct.
 Cannon, Mrs. Richard, 9 Berkshire
 Canty, Mrs. Eugene, 1824 Sibley
 Clay, Mrs. Calvin, 808 Oak
 Clever, Mrs. Henry, 815 Indian Hills Dr.
 Commerford, Mrs. John, 10 Rio Vista
 Crider, Mrs. Russell, 1875 S. River Rd.
 Damron, Mrs. Edward, 602 N. 5th, Elsberry 63343
 Del Pizzo, Mrs. Ferdinand, 900 Elmwood
 DuMontier, Mrs. R. J., O'Fallon 63366
 Fleming, Mrs. Robert, 2 Indian Hills Ct.
 Goldkamp, Mrs. John, 10 Shawnee
 Gore, Mrs. Glenn, 140 Ladue Pines Rd., Creve Coeur 63141
 Hanlon, Mrs. Russell, 2616 Brookridge La.
 Hetlage, Mrs. Louis, 5 Sunset Dr., Troy 63379
 Hurd, Mrs. Ronald, 115 S. Cardinal Lane

Keller, Mrs. Robert, 712 Parr, Wentzville 63385
 Kister, Mrs. George, 236 Thomas
 Lensenmeyer, Mrs. Charles, 445 Nantucket
 Muenster, Mrs. Vincent, 29 Shawnee
 Perna, Mrs. Vincent, 14 Rio Vista
 Poggemeier, Mrs. William, 140 Prairie Haute
 Roach, Mrs. Edward, 2520 Bolton
 Roter, Mrs. Alex, 11223 Tureen, St. Louis 63141
 Rother, Mrs. Paul, 7 Elmwood Park
 Schneider, Mrs. Thomas, 3208 W. Adams
 Shuetz, Mrs. Alfred, 904 Indian Hills Dr.
 Tassi, Mrs. Albert, 6 Westminster
 Thiele, Mrs. Otto, 3100 W. Adams
 Towers, Mrs. Orville W., Route 1, Box 1
 Vart, Mrs. Gary, 2620 Park Ave.
 Westerfeld, Mrs. Roy, 32 Ayshire, Route 4
 Wipfler, Mrs. Earl, 405 Duckett Pl.

**ST. LOUIS CITY
(St. Louis)**

Abell, Mrs. Oliver, III, 6449 Wydown 63105
 Allen, Mrs. Willard M., 12538 Conway Rd. 63141
 Arneson, Mrs. Axel N., 6314 Waterman 63130
 Arnot, Mrs. John P., 523 Gatehill Lane, Ballwin 63011
 Backer, Mrs. Matt H., Jr., 101 Flamingo Dr. 63123
 Barden, Mrs. Frank W., 41 Beaver Dr. 63141
 Bartlett, Mrs. Robert W., 6459 Wydown 63105
 Bartlett, Mrs. Willard, Jr., 6345 Ellenwood 63105
 Bartlett, Mrs. Willard, Sr., 53 Westmoreland Pl. 63108
 Bartnick, Mrs. Mitchell L., 6476 Eichelberger 63109
 Becker, Mrs. Stanley C., 11959 Emerald Green Dr. 63141
 Bell, Mrs. Robert M., 35 Glen Rd. 63119
 Benjamin, Mrs. Durand, 7340 Navarre Circle 63123
 Bilsky, Mrs. Nathan, 2 Somerset Downs 63124
 Bindbeutel, Mrs. Arthur H., 3953 Holly Hills 63116
 Boemer, Mrs. Lilburn C., 49 Clermont La. 63124
 Bohrer, Mrs. Harry C., 4112 Flora Pl. 63110
 Boyd, Mrs. Arthur M., 6556 Delor Ave. 63109
 Bradley, Mrs. Frank R., 7404 Oxford Dr. 63105
 Brennan, Mrs. George A., 10546 Hanford 63128
 Brennan, Mrs. Robert Alexis, 6030 Highfield Rd. 63109
 Brown, Mrs. Clyde O., 7419 York Dr. 63105
 Brown, Mrs. E. Eugene, 7508 Cromwell Dr. 63105
 Brown, Mrs. Seymour, 2 Ricardo La. 63124
 Bruns, Mrs. Kenneth, 1 Salem Estates Dr. 63124
 Budd, Mrs. John J., Jr., 501 Overhill Dr. 63130
 Burroughs, Mrs. W. H., 7327 Pershing 63130
 Burst, Mrs. Donald O., 61 Trent Dr. 63124
 Cannon, Mrs. Edward M., 20 Braircliff 63124
 Cappel, Mrs. Powell B., 27 Old Westbury La. 63119
 Carney, Mrs. Joseph E., 6625 Pernod Ave. 63139
 Carroll, Mrs. George A., 7831 Delmar Blvd. 63130
 Cavanagh, Mrs. Denis, 12 Ridgetop 63117
 Cherre, Mrs. Charles J., 10 Ridgetop 63117
 Ciapciak, Mrs. Stanley J., 30 Log Cabin Dr. 63124
 Clark, Mrs. Clarence L., 705 Questover 63141
 Conrad, Mrs. Adolph H., Jr., 9 Dromara Rd. 63124
 Correnti, Mrs. Nicholas A., 6617 Itaska 63109
 Costa, Mrs. Dominic V., 10 Devondale La. 63131
 Daake, Mrs. John W., 48 Portland Pl. 63108

- Dalton, Mrs. Arthur R., 13133 Conway & Mason Rd. 63141
Danforth, Mrs. William H., 7 Black Creek Lane 63124
Dewald, Mrs. Paul A., 60 Conway La. 63124
Diehr, Mrs. Alvin H., Park Tower Apts. 63105
DiLeo, Mrs. Senatro W., 34 Ridgeway 63117
Dorton, Mrs. Robert K., 12065 Heatherdance 63131
Drews, Mrs. Robert C., 7361 Cornell Ave. 63130
Dreyer, Mrs. Carl Joseph, 45 Glen Rd. 63119
Dripps, Mrs. Roy C., 7824 Keswick Pl. 63119
Eades, Mrs. Dee W., 6 Kingsbury Pl. 63112
Eagleton, Mrs. Mark D., 22 Carrswold 63105
Edwards, Mrs. Joseph C., 610 W. Polo Dr. 63105
Egan, Mrs. Robert C., 556 Oak Haven Lane 63141
Eigel, Mrs. Edwin G., 3654 Flora Pl. 63110
Ernst, Mrs. Edwin C., 2 Schultz Rd. 63122
Feller, Mrs. Harold H., 5834 Bermuda Rd. 63121
Finn, Mrs. Murray Eugene, 47 Portland Pl. 63108
Fish, Mrs. Virgil D., 2500 Town & Country La. 63131
Fitzgerald, Mrs. Leo P., 7219 Cornell Ave. 63130
Fitzgerald, Mrs. William T., 6425 Rhodes 63109
Flotte, Mrs. Bernard H., 6 Lila Lane, Florissant 63030
Ford, Mrs. Lee T., Jr., 45 Green Acres 63137
Franklin, Mrs. Max S., 7536 Buckingham Dr. 63105
Fries, Mrs. Armand D., 11 W. Geyer La. 63131
Furla, Mrs. Gus John, 57 Broadview Dr. 63105
Gagliardo, Mrs. Joseph, 70 E. Ladue Estates 63141
Gandlmayr, Mrs. Jack M., 13600 Peacock Farm Rd. 63141
Gantner, Mrs. George E., Jr., 233 Woodbourne Dr. 63105
Gantz, Mrs. John A., 6106 Willow Bend 63123
Glaser, Mrs. Martin J., 3550 Hawthorne Blvd. 63104
Glick, Mrs. Harry N., Mason Rd., R.R. 13, Kirkwood 63122
Goldman, Mrs. Melvin L., 8650 Barby La. 63124
Gomez, Mrs. Cesar A., Jr., 18 Portland Dr. 63131
Grebel, Mrs. Clement B., 58 Grantwood Lane 63123
Green, Mrs. William R., 10311 N. Sun-swept 63141
Gresick, Mrs. Robert J., 11 Coach-N-Four La. 63131
Grogan, Mrs. Frank M., 4166 Flora Pl. 63110
Gunn, Mrs. Walter T., 6742 Itaska 63109
Haddock, Mrs. James N., 111 Firwood Dr. 63119
Haeberle, Mrs. Frederick S., 5351 Delmar, 63132
Hagebusch, Mrs. Omar E., 16 Covington La. 63132
Hall, Mrs. Preston C., 39 Woodcrest Dr. 63124
Hammond, Mrs. John J., 412 Medina Dr. 63122
Harkins, Mrs. William M., 7 Kingsbury Pl. 63112
Harris, Mrs. Solon P., 7138 Maryland 63130
Harrison, Mrs. Lee B., 44 Ridgemoor Dr. 63105
Hassett, Mrs. Henry A., 4440 Lindell 63108
Haynes, Mrs. Pugh, 8006 Gannon 63130
Henderlite, Mrs. John W., 11927 Spruce Haven Ct. 63141
Henschel, Mrs. Eugene V., 55 Broadview Dr. 63105
Hertel, Mrs. Ronald C., 122 Frontenac Forest 63131
Hicks, Mrs. Robert S., 733 Sherwood Dr. 63119
Hilbert, Mrs. Paul H., 5701 Pernod Ave. 63139
Hogan, Mrs. Patrick C., 9039 Laurel Crest Dr. 63126
Hollo, Mrs. Vencel W., 5925 Lindell 63112
Hutchinson, Mrs. William B., 15 Portland Dr. 63131
Jensen, Mrs. Joshua E., 3 Brazillian Ct. 63124
Jones, Mrs. Otey S., 2010 Longfellow Blvd. 63104
Jost, Mrs. Charles A., 2 Bellerive Acres 63121
Karandjeff, Mrs. A. D., 48 Lake Forest 63117
Karl, Mrs. Michael M., 14 Thorndell 63117
Kelley, Mrs. Robert W., 5371 Waterman Ave. 63112
Kendig, Mrs. John H., 841 Rolfe Dr., Kirkwood 63122
King, Mrs. Samuel J., 5000 S. Broadway 63111
Klein, Mrs. Harry A., 2 Sunswep Dr. 63141
Klein, Mrs. Saul J., 11 Huntleigh Downs 63131
Klippel, Mrs. Bernhardt W., 52 Fair Oaks 63124
Kloeker, Mrs. Richard J., 1022 Hampton Pk. 63117
Klugel, Mrs. William A., 2845 Gravois Ave. 63118
Kneal, Mrs. Ellsworth, 725 S. Skinner 63105
Knight, Mrs. Franklin P., 11465 Fairlane Ct. 63136
Knight, Mrs. William A., Jr., 12 Braircliff 63124
Koehler, Mrs. George Alvin, 3 Litzinger La. 63124
Komanetsky, Mrs. William, 7447 Sharp Ave. 63116
Koon, Mrs. Bernard T., 2623 Gurney Ct. 63110
Kountz, Mrs. William B., 2619 Gurney Ct. 63110
Kowert, Mrs. Edward H., 330 Planthurst Dr. 63119
Krojanker, Mrs. Rolf J., 1060 Purdue 63130
Kronemer, Mrs. Norton S., 703 Westwood Dr. 63105
Kuhlman, Mrs. Robert E., 12 Upper Barnes Rd. 63124
Langsdorf, Mrs. Herbert S., 3681 Alberta Ave. 63116
Lau, Mrs. Luis F., 1467 Reauville Dr. 63122
Laux, Mrs. France A., 287 Ridge Trail Dr., Chesterfield 63017
Lembeck, Mrs. Joseph A., 4103 Flora Pl. 63110
Lerwick, Mrs. E. R., 40 Portland Pl. 63108
Lewis, Mrs. J. Eugene, Jr., 7129 Kingsbury Ave. 63130
Lohr, Mrs. Curtis H., 300 S. Grand 63103
Lottes, Mrs. J. Otto, 1028 Winwood Dr. 63124
MacDonald, Mrs. William O., 63 Briarcliff 63124
Machek, Mrs. Otaker, 16 Carswold 63105
Macnish, Mrs. James M., 229 Bompert 63119
Mathae, Mrs. George H., 3167 S. Grand Blvd. 63118
McMahon, Mrs. Alphonse, 5 Covington Meadow 63132
Mehan, Mrs. Donald J., 34 Gadwin 63124
Mendonsa, Mrs. Lawrence E., 138 Ridgcrest Dr., Chesterfield 63017
Merenda, Mrs. Sam J., 45 Berry Rd. Pk. 63122
Merklin, Mrs. Anton L., 1 Fordyce Manor 63131
Mestres, Mrs. Hugh M., 12329 Federal Rd. 63131
Meyerhardt, Mrs. Milton H., 665 S. Skinker, 63105
Montgomery, Mrs. Austin F., 18 Southcote Rd. 63144
Morfit, Mrs. John C., 7627 Wydown Blvd. 63105
Moskop, Mrs. Peter G., 1105 Holly Hills Ave. 63111
Mowrey, Mrs. William O., 7071 Lindell 63130
Mueller, Mrs. Wilbur K., 1160 S. McKnight Rd. 63117
Muecher, Mrs. R. O., 19 Country Life Acres 63131
Neilson, Mrs. Arthur W., 6349 Alexander Dr. 63105
Neun, Mrs. William F., 5862 Delor 63109
Nye, Mrs. Robert S., 4910 Broadway S.
Obermeyer, Mrs. Charles G., 3957 Holly Hills Blvd. 63116
O'Neal, Mrs. Lawrence W., 9975 Holliston Ct. 63124
Oppenheimer, Mrs. Henry E., 9444 Old Bonhomme Rd. 63132
Orenstein, Mrs. Joseph M., 417 Jackson Ave. North 63130
O'Sullivan, Mrs. George A., 6181 Lindell 63112
Parsons, Mrs. Richard P., 649 Mosley Rd. 63141
Patrick, Mrs. Roman L., 13109 Four Poster Ct. 63141
Peden, Mrs. Joseph C., Jr., 51 Fair Oaks 63124
Peeler, Mrs. J. O., 10000 Knoll Crest Ct. 63136
Pernoud, Mrs. Flavius G., Jr., 841 Audubon Dr. 63105
Pernoud, Mrs. Michael F., 51 Frontenac 63131
Powell, Mrs. Earl A., 78 Lake Forest 63117
Powers, Mrs. Pierce W., 4 Crestwood Dr. 63105
Pyne, Mrs. Herbert S., 5320 Mardel 63109
Rainey, Mrs. Robert, 5165 Lindell Blvd. 63108
Raybuck, Mrs. H. E., Jr., 22 Rolling Rock Ct. 63124
Rendleman, Mrs. George F., 532 Midvale 63130
Rendleman, Mrs. George R., Jr., 2 Vista Brook 63124
Ritter, Mrs. Hubert A., 26 Briarcliff 63124
Rodriguez, Mrs. U. R., 10408 Daybreak Dr. 63128
Roy, Mrs. Joseph A., 55 Berkshire 63117
Royce, Mrs. Robert K., 766 High Hampton Rd. 63124
Ryan, Mrs. Robert E., 1 West Point Lane 63131
Sanders, Mrs. Robert D., 4214 Flora Pl. 63110
Sante, Mrs. Leroy, 308 Orchard Ave. 63119
Scheer, Mrs. George E., 53 Berkshire 63117
Schmidt, Mrs. Edwin H., 10240 Schuessler Rd. 63128
Schweiss, Mrs. John F., 1414 Westwind Dr. 63131
Sciortino, Mrs. Gaspere, 1019 Laval Dr. 63132
Scott, Mrs. Elwin Powers, 12718 Post Oak Rd. 63131
Sexton, Mrs. Daniel L., 14 Crestwood Dr. 63105
Shaw, Mrs. Edward J., 3723 Delor 63109
Sherwin, Mrs. Charles F., Lonedell 63060
Sherwin, Mrs. Charles S., 3971 Flora Pl. 63110
Simon, Mrs. David, 7809 Gannon 63130
Simon, Mrs. Jerome I., 12 Westridge Ct. 63124
Smith, Mrs. Benjamin F., 5 Fordyce Manor 63131
Smith, Mrs. Garland F., 1115 Hampton Park Dr. 63117
Smith, Mrs. Herbert P., 9245 Sappington Dr. 63126
Smith, Mrs. Hugh R., 8836 Rock Forest Dr. 63123
Smolik, Mrs. Edmund A., 59 Middlesex Dr. 63144
Spoeneman, Mrs. Walter H., 18 Birtz Ct. 63137
Stephens, Mrs. LeRoy, 218 Sylvester 63119
Stindel, Mrs. Charles E., 341 Violet Lane 63119
Strominger, Mrs. Donald B., 701 Yale Ave. 63130
Stroud, Mrs. C. Malone, 6232 McPherson 63130
Sudholt, Mrs. Alfred F., Jr., 13398 Conway Rd., Normandy 63121
Sullivan, Mrs. Clement J., 7740 Mohawk Dr. 63105
Sweet, Mrs. Herbert C., 3 St. James Ct. 63119
Thale, Mrs. Thomas, 351 Meadow Brook, Ballwin 63011
Thompson, Mrs. J. William, 92 Lake Forest 63117
Tjoflat, Mrs. Oliver E., 252 Woodbourne 63105
Tremain, Mrs. Irl G., 4254 Flora Pl. 63110
Twedell, Mrs. Donald, 5341 Bermuda Rd. 63121
Uhlemeyer, Mrs. Henry A., Sr., 641 A. Geoffrey La. 63132
Vandover, Mrs. John T., 3 Grantwood Lane 63123

Vest, Mrs. James C., 2800 Stonington 63131
Virant, Mrs. John A., 119 S. Spoede Rd.
63141
Von Kaenel, Mrs. Joseph E., 551 Barnes
Rd. 63124
Wacker, Mrs. Leo L., 9323 Pardee Rd.
63123
Wegner, Mrs. Carl R., 7401 Wellington Ave.
63130
Weinel, Mrs. Francis G., 333 Oakwood Ave.
63119
Weir, Mrs. Don C., 625 Sherwood Dr.
63119
Welsh, Mrs. Laurence C., 103 Old Watson
Rd. 63119
Wennerman, Mrs. Sam F., 501 Warren
63130
Werner, Mrs. William A., 6015 Childress
Ave. 63109
Wilucki, Mrs. Melvin R., 6455 Westway Rd.
63109
Witt, Mrs. Clyde M., 11 Deer Creek Woods
63124
Wittgen, Mrs. Edward M., 8901 Rock Forest
Dr. 63123
Young, Mrs. H. McClure, 245 Union Blvd.
63108
Zeitler, Mrs. William T., 152 Timbercrest
Rd. 63122
Zink, Mrs. Oscar C., 9 The Orchards 63132

ST. LOUIS COUNTY

Alex, Mrs. Morris, 18 Crosswinds 63132
Aronson, Mrs. Abraham, 11 Conway Lane
63124
Ayata, Mrs. Sedat, 2 Bon Aire, Olivette
63132
Bagby, Mrs. J. W., 7 Country Life Acres
63131
Bailey, Mrs. Wm. Harold, 9157 E. Milton
Ave. 63114
Belew, Mrs. Joe E., 1007 Romine La. 63122
Bergmann, Mrs. John F., 550 Bonhomme
Woods 63132
Bernsdens, Mrs. Gerard H., 12933 Topping
Estates 63131
Berwald, Mrs. Irvin I., 747 Old Bonhomme
Rd., University City 63130
Boles, Mrs. C. Read, 9307 Old Bonhomme
Rd. 63132
Bowles, Mrs. G. Robert, 1054 Barry Ct.
63122
Briscoe, Mrs. John R., 10053 Briarwood Dr.
63124
Cacioppo, Mrs. Joseph E., 1809 New
Jamestown Rd. 63138
Carlson, Mrs. Arne E., 89 Pebblebrook La.,
Creve Coeur 63141
Catanzaro, Mrs. R. E., 24 Foxboro Rd.
63124
Chinsky, Mrs. Murray, 7200 Colgate Ave.,
University City 63130
Coldwater, Mrs. Kenneth, 1520 Ridgewood
Dr. 63126
Costrino, Mrs. Joseph A., 12567 Conway
Rd., Creve Coeur 63141
Cowdry, Mrs. Edmund, 220 Woodridge,
Kirkwood 63122
Davidson, Mrs. Morris, 128 Frontenac
Forest 63131
Davis, Mrs. Edgar W., 49 Woodcrest Dr.
63124
Deitchman, Mrs. Robert, 1 Ridgeway Dr.,
Olivette 63132
Denny, Mrs. Robert B., 7827 Delmar Blvd.,
University City 63130
Deyton, Mrs. John W., 659 Fairview Ave.,
Webster Groves 63119
Diehr, Mrs. Maurice A., 28 Dromara Rd.,
Ladue 63124
Dill, Mrs. Foster A., 1551 Bellevue Ave.,
Richmond Heights 63117
Doisy, Mrs. Robert A., 103 Edwin Ave.,
Glendale 63122
Dowd, Mrs. James F., 4400 Lindell Blvd.,
Apt. 20 N. 63108
Dumonceaux, Mrs. Leonard, 301 Grascony
Ave. 63122
Dyer, Mrs. Clyde P., Route 2, Box 360,
Carmel, California 93921
Efron, Mrs. Joseph, 30 Ladue Estates Dr.
63141
Eidelman, Mrs. Jack, 8001 Watkins Dr.
63105
Eller, Mrs. C. Howe, 1408 Fawnvalley Dr.
63131
Emerson, Mrs. Reynolds L., 618 S. Rock
Hill Rd., Webster Groves 63119
Estes, Mrs. Jack, 53 Bellerive Acres, 63121
Ferrara, Mrs. John P., 31 Bellerive Acres,
Normandy 63121
Fischer, Mrs. John, 22 Colonial Hills Pkwy.,
Creve Coeur 63141
Fletes, Mrs. James W., 5601 Lindell Blvd.
63112
Forsman, Mrs. Waldo W., 4128 S.
Lindbergh Blvd. 63127
Fox, Mrs. Leon J., 903 S. Warson Rd. 63124
Freiheit, Mrs. Harold J., 9270 Rott Rd., Sun-
set Hills 63127
Friedman, Mrs. Ira J., 33 Ridgemoor Dr.
63105
Fuchs, Mrs. George J., Route 2, Barnett
65011
Gall, Mrs. Ira G., 8989 Moydalgan Dr.
63124
Gearhart, Mrs. Wilbur H., 14084 Deltona
Dr., Chesterfield 63017
Gellman, Mrs. J. M., 900 Clayworth Dr.,
Ballwin 63011
Goodman, Mrs. Nathaniel, 9 Scarsdale La.,
Richmond Heights 63117
Goodrich, Mrs. Harold A., 52 S. Rock Hill
Rd., Webster Groves 63119
Hamilton, Mrs. Caldwell K., 11317 Moseley
La., Creve Coeur 63141
Harwell, Mrs. J. Larry, 6914 Kingsbury 63130
Hayward, Mrs. John D., 221 Clay Ave. So.,
Kirkwood 63122
Hershey, Mrs. Falls B., 11 Wydown Terr.
63124
Hoard, Mrs. Joseph W., 129 E. Kirkham
Ave., Webster Groves 63119
Hobbs, Mrs. John E., 25 Woodcrest Dr.
63105
Holscher, Mrs. Edward C., 234 W. Jackson
Rd., Webster Groves 63119
Hughes, Mrs. Robert G., 41 Chaminade
Dr., Creve Coeur 63141
Izmirlan, Mrs. Grant, 525 Fairview Ave.,
Webster Groves 63119
Jacobs, Mrs. Frederick A., 7308 Winchester
Dr., Normandy 63121
Kamuran, Mrs. Ozgoncu, 322 Laduemont,
Creve Coeur 63141
Kendis, Mrs. Joseph B., 19 Warson Terr.,
Clayton 63105
Kenzer, Mrs. Jack I., 1451 Wilton La.
63122
Kilker, Mrs. Clarence H., 7231 Winchester
Dr., Normandy 63121
Kimelman, Mrs. Nathan, 21 Granada Way
63124
King, Mrs. E. E., 2915 Bellerive Dr.,
Normandy 63121
Klippel, Mrs. Allen, 7112 Wydown Blvd.,
Clayton 63105
Knock, Mrs. Henry L., 33 Algonquin Wood,
Glendale 63122
Kopp, Mrs. Jules H., 23 Arbor Terr. 63132
Lansche, Mrs. W. Edward, 809 Rampart Dr.
63122
Leslie, Mrs. C. H., 1065 Haversham 63131
Lipschitz, Mrs. Ervin, 30 Kenton Pl. 63132
Lissner, Mrs. Bart, 6227 McPherson Ave.
63130
Lord, Mrs. Richard, 8 Mayfair Rd. 63124
Luehrs, Mrs. Robert O., 900 S. Hanley Rd.,
Apt. 2A, Clayton 63105
Lund, Mrs. Herluf G., 58 Portland Dr.,
Frontenac 63131
Luther, Mrs. George A., 112 Wildwood La.,
Kirkwood 63122
Magidson, Mrs. S. Joseph, 615 Forest Ct.,
Clayton 63105
Magness, Mrs. Guy N., 7727 Blackberry La.,
University City 63130
Malles, Mrs. A. Conrad, 68 Woodoaks Trail
63124
Mayer, Mrs. Robert A., 614 Spring Mead-
ows Dr., Ballwin 63011
McLean, Mrs. Royal C., 520 W. Jewel,
Kirkwood 63122
McNalley, Mrs. M., 2100 Raynor Rd.
63122
Meador, Mrs. James R., 9 Bellerive Acres
63121
Meneses, Mrs. Orlando G., 719 Craig Dr.
63122
Mezera, Mrs. Raymond A., 7345 White-
haven Dr., Afton 63123
Miles, Mrs. Paul W., 15 Ridge Creek Rd.,
Creve Coeur 63141
Miller, Mrs. Charles, Jr., 206 Fillmore,
Kirkwood 63122
Molden, Mrs. Charles A., 36 Bellerive Acres,
Normandy 63121
Montes, Mrs. Arturo, 11542 Rosary 63138

Moore, Mrs. Harry G., 17 Westmoreland Pl.
63108
Moore, Mrs. William E., 7277 N. Roland
Blvd., Normandy 63121
Mueller, Mrs. Robert J., 40 Huntleigh
Woods 63131
Myers, Mrs. Ivan, 1315 Bardot La. 63141
Nakada, Mrs. James R., 2 Huntleigh Downs
63131
O'Connell, Mrs. John J., 1937 O'Connell
Ave., Overland 63114
Ott, Mrs. Harold J., 29 Bopp La. 63131
Ottensmeyer, Mrs. Charles D., 12 Orange
Hills Dr., Chesterfield 63017
Pennoyer, Mrs. James, 117 Plant Ave.,
Webster Groves 63119
Phillips, Mrs. Hanford, 215 Graybridge Rd.,
Clayton 63105
Probst, Mrs. Raymond E., 23 Godwin La.
63124
Racadio, Mrs. Sever, 223 Orrick La., Kirk-
wood 63122
Ragland, Mrs. John E., 624 Kehrs Mill Rd.,
Ballwin 63011
Rao, Mrs. Carlo, 18 Ladue Estates Dr. West
63141
Redington, Mrs. James C., Jr., 1 Tuscany Pk.
63105
Reiches, Mrs. Aaron J., 11 Brazillian Ct.
63124
Reilly, Mrs. Pierce J., 825 S. Hanley Rd.,
Clayton 63105
Roberts, Mrs. Harold K., 434 S. Hanley Rd.,
Clayton 63105
Robertson, Mrs. Frank G., 642 N. Forest,
Webster Groves 63119
Roblee, Mrs. Melvin A., 5 Kingston Manor
63124
Roufa, Mrs. Joseph, 12390 Montsoursis Dr.
63141
Rubin, Mrs. Robert, 411 Tregaron Pl.
63131
Ruhling, Mrs. Rudy, 6 Webster Knolls,
Webster Groves 63119
Schattyn, Mrs. J. Martyn, 9 Huntleigh
Downs 63131
Schwartz, Mrs. Melvin M., 61 Lake Forest,
Richmond Heights 63117
Schwarz, Mrs. Luis, 8145 University Dr.
63105
Shah, Mrs. Anwar, 9810 Log Cabin Ct.
63124
Shepherd, Mrs. Charles T., 10 Covington
Meadows 63132
Simril, Mrs. Wayne A., 21 Somerset Downs
63124
Sisk, Mrs. James C., 146 Frontenac Forest
63131
Speno, Mrs. Angelo A., 11815 Point Oak
63131
Steiner, Mrs. A. J., 8 Country Aire 63131
Sullivan, Mrs. William, 1303 Lockett La.,
Kirkwood 63122
Sutter, Mrs. Richard A., 7215 Greenway
Ave., University City 63130
Teiber, Mrs. Fred W., 38 Fair Oaks 63124
Tobias, Mrs. Norman, 700 S. Meramec
Ave., Clayton 63105
Tremain, Mrs. E. E., 2901 Big Bend Rd.,
Maplewood 63143
Tsifutis, Mrs. Argyrios A., 8631 Rosalie Ave.,
Brentwood 63144
Valach, Mrs. Frank J., 4 Nassau Cir.,
Creve Coeur 63141
Viers, Mrs. Wyane, 911 W. Adams Ave.,
Kirkwood 63122
Vollmar, Mrs. C. J., 9756 Old Warson Rd.
63124
Walker, Mrs. Harry, 7361 Stanford 63130
Walther, Mrs. Roy A., Jr., 7 High Acres Dr.
63132
Walton, Mrs. J. H., 6216 Lindenwood Ct.
63109
Weitman, Mrs. Maximilian, 8326 Delcrest
Dr. 63124
Westrup, Mrs. Ellsworth A., 14 N. Taylor
Woods, Kirkwood 63122
Whitener, Mrs. Miles, 580 Dieleman Rd.,
Olivette 63132
Whitener, Mrs. Paul R., 3291 Carlow Pl.,
St. Ann 63074
Windsor, Mrs. Charles E., 1448 Wilton
Lane 63124
Wittler, Mrs. Harry A., 1919 Korlin Dr.
63131
Yanow, Mrs. Mitchell, 7396 Bedford Ave.,
University City 63130
Yap, Mrs. Mardonio, 53 High Valley Dr.,
Chesterfield 63017

SALINE COUNTY
(Marshall 65340)

Aiken, Mrs. George A., 50 Ridgecrest Rd.
Blalock, Mrs. Robert W., 526 E. Eastwood
Knipschild, Mrs. Bedford F., 505 N.
Brunswick
McBurney, Mrs. C. Alex, 927 Hurt, Slater
65349
McCorkle, Mrs. E. Lee, 791 Eastwood
McCoy, Mrs. Donald L., 40 E. Mission
Raynor, Mrs. Richard C., 758 S.
Brunswick
Reid, Mrs. James A., 102 E. Rea
Roehrs, Mrs. Marvin Emil, 756 E. Eastwood
Simmons, Mrs. Sterling P., 963 S. Lafayette
Watson, Mrs. Cecil L., 519 E. Arrow

SEMO COUNTY
(Sikeston 63801)

SOUTH CENTRAL
(Howell-Oregon-Texas-Wright-
Douglas-Ozark Counties)

Coffee, Mrs. Amos L., Highway 60 E., Wil-
low Springs 65793
Cooper, Mrs. C. W., Thayer 65791
Denney, Mrs. R. W., 605 E. State Blvd.,
Mountain Grove 65711
Dreyer, Mrs. W. F., Houston 65483
Fowler, Mrs. M. L., 1302 W. 3rd, West
Plains 65775
Hasek, Mrs. James, 609 Doris Ave.,
Mountain Grove 65711
Morgan, Mrs. W. T., 1309 W. 2nd, West
Plains 65775
Smith, Mrs. C. Franklin, Route 3, Willow
Springs 65793
Smith, Mrs. Rollin H., 620 W. Main, West
Plains 65775
Walker, Mrs. A. T., Thayer 65791
Wall, Mrs. Joe A., 320 Cherry Ave.,
Houston 65483
Wiles, Mrs. Jack, 1212 W. Broadway,
West Plains 65775

WEST CENTRAL
(Bates-Cass-Cedar-St. Clair-
Vernon Counties)

Barger, Mrs. O. B., P. O. Box 353, Har-
risonville 64701
Haynie, Mrs. William W., 603 Lee, Butler
64730
Jones, Mrs. Edward S., 301 N. Price,
Harrisonville 64701
Klund, Mrs. A. W., 1400 Country Club Dr.,
Pleasant Hill 64080
Love, Mrs. Standlee, 527 South Adams,
Nevada 64772
Lusk, Mrs. Charles A., Jr., 911 Country
Club Dr., Butler 64730
Luter, Mrs. Carter W., 506 Havana, Butler
64730
Magee, Mrs. Robert L., 115 W. Pine, El
Dorado Springs 64744
McCann, Mrs. Louis P., 920 W. Cherry,
Nevada 64772
Wheeler, Mrs. Robert L., 2100 Crane St.,
Harrisonville 64701
Wray, Mrs. Rolla B., 701 S. Adams, Nevada
64772

MEMBERS AT LARGE

Allen, Mrs. S. Lloyd, 3809 N.W. 62nd Terr.,
Kansas City 64151
Bach, Mrs. Lyle M., 1737 Harrison Hill,
Hannibal 63401
Bass, Mrs. B. J., Salem 65560
Bauman, Mrs. Henry C., 929 W. 3rd, Mary-
ville 64468
Bealer, Mrs. A. L., 160 Mocking Bird La.,
Lebanon 65536
Campbell, Mrs. James, Loch Forest, Macon
63552
Carrington, Mrs. Howard W., 105 Bennett,
Lebanon 65536
Carron, Mrs. Oscar A., 208 N. Water, Per-
ryville 63775
Comeau, Mrs. Richard, Dexter Convalescent
Manor, Dexter 63841

Crider, Mrs. Clara, Dixon 65459
Davis, Mrs. Landis Y., Canton 63435
De Genova, Mrs. Gerald H., 585 Cedar
Lane, Ste. Genevieve 63670
Dierker, Mrs. H. D., Clark at Chestnut,
Lebanon 65536
Dreyer, Mrs. Philip V., 208 Short,
Huntsville 65259
Eggleston, Mrs. Donald E., 410 N.
Rutherford, Macon 63552
Fischer, Mrs. Theodore, P.O. Box 146,
Altenburg, 63732
Fleming, Mrs. J. Will, Jr., Urbandale,
Moberly 65270
Fleming, Mrs. Thomas S., 517 Fort St.,
Moberly 65270
Froelich, Mrs. R. W., 1345 W. Madison,
Lebanon 65536
Garrison, Mrs. Theodore W., Jr., Camdenton
65020
Hite, Mrs. Dennis, 140 Mockingbird La.,
Lebanon 65536
Huber, Mrs. L. E., 400½ W. Reed,
Moberly 65270
Kimball, Mrs. I. W., 6600 Tower Dr. N.W.,
Kansas City 64151
Koon, Mrs. Ben, Route 3, Bolivar 65613
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Audrain County Medical Society—third Tuesday of each month.
 Andrew County Medical Society—meets only on call.
 Barton-Dade County Medical Society—third Wednesday of each month.
 Benton County Medical Society—meets only on call.
 Boone County Medical Society—first Tuesday of each month at 7 p.m.
 Buchanan County Medical Society—first Wednesday of each month.
 Butler-Wayne-Ripley County Medical Society—first Wednesday of each month.
 Callaway County Medical Society—third Thursday of each month.
 Cape Girardeau County Medical Society—first Monday of each month.
 Chariton-Macon-Monroe-Randolph County Medical Society—second Thursday of each month, September through May.
 Clay County Medical Society—fourth Tuesday of each month.
 Clinton County Medical Society—meets only on call.
 Cole County Medical Society—fourth Tuesday of each month.
 Cooper County Medical Society—first Monday after the 15th of each month.
 Dallas-Hickory-Polk-Dade County Medical Society—first Wednesday of each month.
 Dunklin County Medical Society—third Monday of each month.
 Franklin-Gasconade-Warren County Medical Society—first Tuesday of each month at the St. Francis Hospital, Washington, at 7 P.M.
 Grand River Medical Society (Caldwell-Carroll-Livingston, Grundy-Daviess, Harrison, Linn, Mercer, DeKalb)—second Thursday of each month.
 Greene County Medical Society—fourth Friday of each month.
 Henry County Medical Society—meets only on call.
 Howard County Medical Society—meets only on call.
 Jackson County Medical Society—March, May, October and December.
 Jasper County Medical Society—second Tuesday of each month, September through May.
 Jefferson County Medical Society—meets first Wednesday of each month at 7:30 P.M.
 Johnson County Medical Society—meets only on call.

Lafayette-Ray County Medical Society—second Tuesday of each month at 7:30 P.M., at the Victory Cafe, Lexington.
 Lewis-Clark-Scotland County Medical Society—meets only on call.
 Lincoln-St. Charles County Medical Society—fourth Tuesday of each month.
 Marion-Ralls-Shelby County Medical Society—third Tuesday of each month, 7:30 p.m.
 Mid-Missouri County Medical Society (Phelps-Crawford-Dent-Pulaski-Maries-Laclede)—fourth Thursday of each month.
 Miller County Medical Society—meets only on call.
 Mineral Area County Medical Society (St. Francois-Iron-Madison-Washington-Reynolds-St. Genevieve)—fourth Thursday of each month.
 Moniteau County Medical Society—second Thursday of each month.
 Montgomery County Medical Society—meets only on call.
 Morgan County Medical Society—meets only on call.
 North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)—meets only on call.
 Northwest Missouri Medical Society (Nodaway-Holt-Atchison-Gentry-North)—second Thursday of each month.
 Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney-Newton-McDonald)—second Tuesday of each month, September through June.
 Pemiscot County Medical Society—second Thursday of each month.
 Perry County Medical Society—second Thursday of each month.
 Pettis County Medical Society—third Monday of each month, September through May.
 Pike County Medical Society—third Tuesday of each month.
 Platte County Medical Society—meets only on call.
 St. Louis County Medical Society—second Wednesday of each month, September through May.
 St. Louis Medical Society—third Tuesday of each month, October through May.
 Semo County Medical Society (Stoddard, New Madrid, Mississippi, Scott)—third Wednesday of each month, September through May.
 South Central Counties Medical Society (Howell-Oregon-Texas-Wright-Douglas-Ozark)—fourth Wednesday of each month.
 Webster County Medical Society—meets only on call.
 West Central Missouri Society (Bates-Cass-St. Clair-Vernon-Cedar)—second Thursday of each month.

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AUGUST, 1971

VOLUME 68, NUMBER 8

**The
Health Care
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Missouri**

By
Hector W.
Benoit, Jr., M.D.,
Chairman
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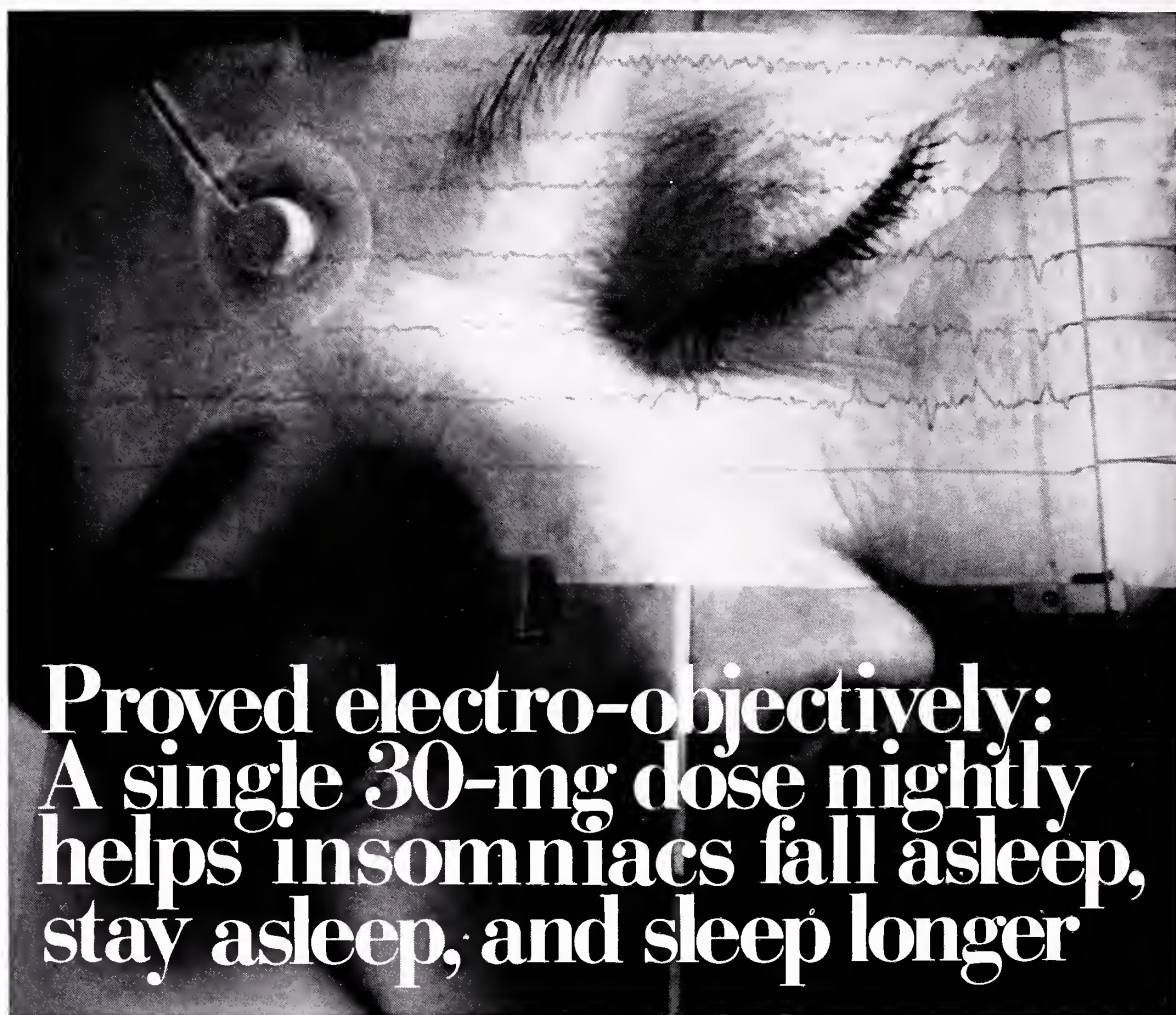
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114th MSMA Annual Session
April 6-9, 1972, Kansas City



Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro-oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.^{1,2,3}

Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,¹ Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.

Confirmed clinically

Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

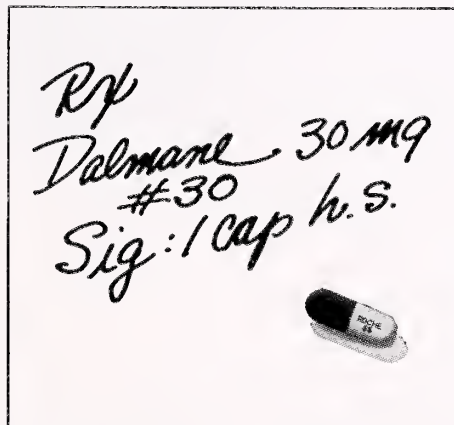
Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

In summary, Dalmane is useful in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. It can be used effectively in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep.

Dalmane (flurazepam HCl) is generally well tolerated

In most instances in which adverse effects with Dalmane were reported, they were mild, infrequent and seldom required discontinuation of the drug. Dizziness, drowsiness, lightheadedness and the like were the side effects most frequently noted, particularly in elderly or debilitated patients.³ Instances of hepatic dysfunction, paradoxical reactions (excitement) and hypotension are rare with Dalmane, and morning hang-over is relatively infrequent. In studies to date the effectiveness of Dalmane for recommended periods of use is maintained without need to increase dosage.

References: 1. Kales, A., et al.: "Effectiveness of Sleep Medications: All-Night EEG Studies of Hypnotic Drugs," in Proc. 7th Internat. Cong. Electroencephal. and Clin. Neurophysiol., San Diego, Calif., Sept. 13-19, 1969. 2. Kales, A., et al.: "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," in Kales, A. (ed): *Sleep: Physiology and Pathology*, Phila., Lippincott, 1969, p. 331. 3. Data on file, Medical Department, Hoffmann-La Roche Inc.



For the sleep your patients need

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Before prescribing, please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.



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Missouri Medicine

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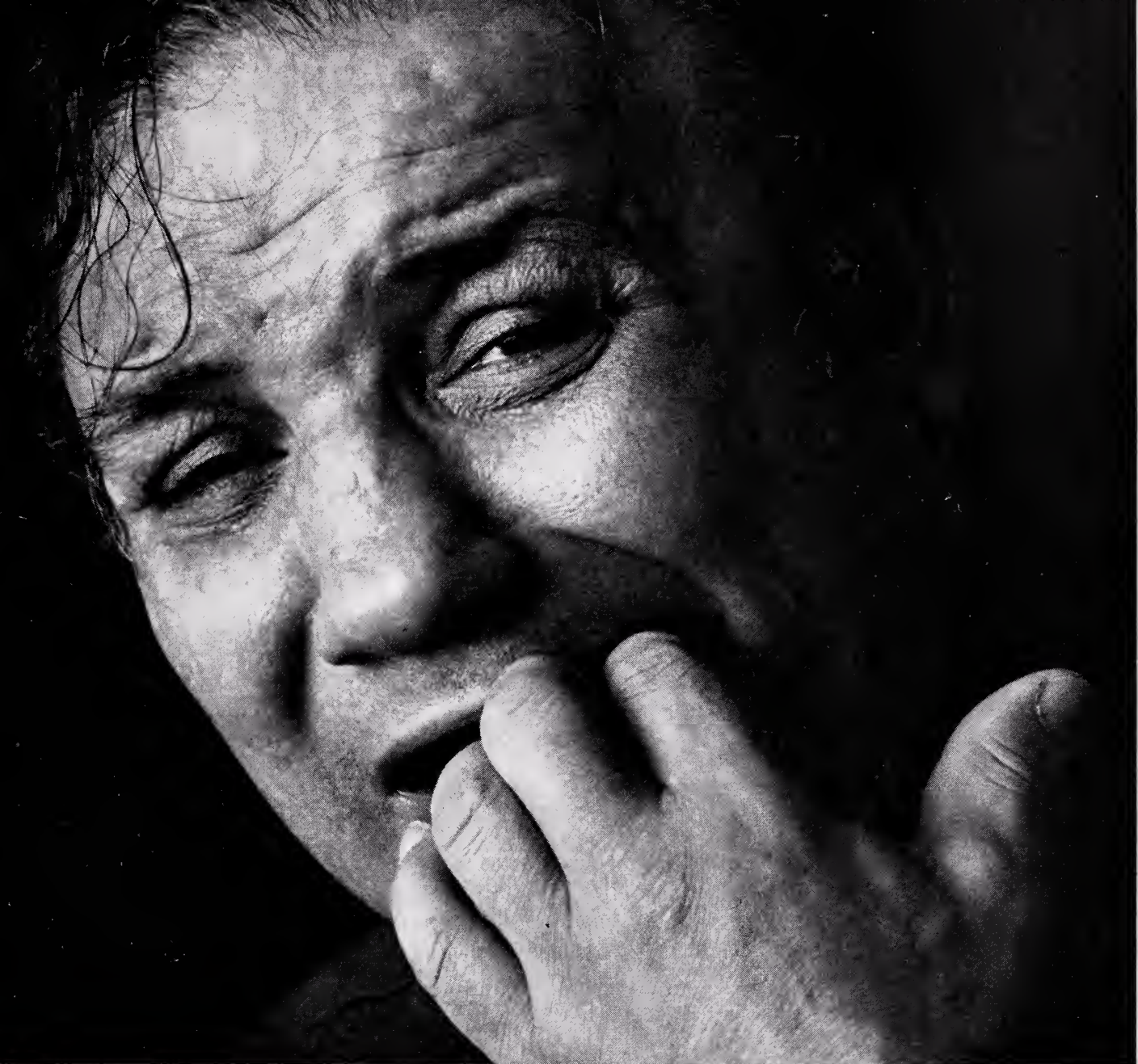
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Illustrations should be glossy prints or drawings in India ink on white paper. They should

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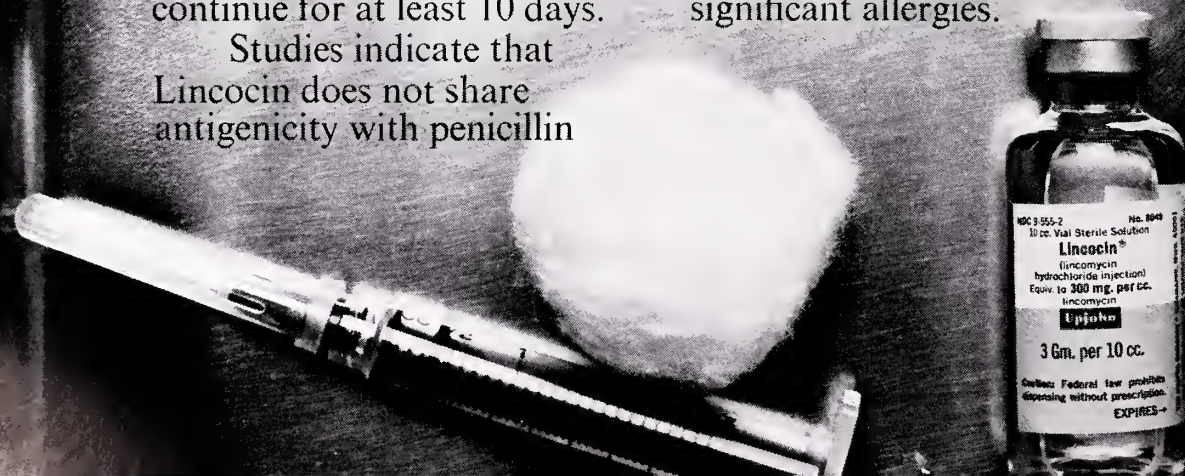
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WARNINGS: Cases of severe and persistent diarrhea have been reported and at times drug discontinuance has been necessary. This diarrhea has been occasionally associated with blood and mucus and at times has resulted in acute colitis. This reaction usually has been associated with oral therapy, but occasionally has been reported following parenteral therapy. Although cross sensitivity to other antibiotics has not been demonstrated, make careful inquiry concerning previous allergies or sensitivities to drugs. Safety for use in pregnancy has not been established and Lincocin is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or

significant allergies. Overgrowth of non-susceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β -hemolytic streptococci infection for ten days to diminish likelihood of rheumatic fever or glomerulonephritis.

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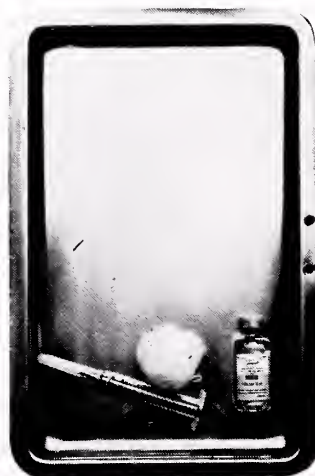
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PHYSICIANS URGED TO RESTRICT USE OF STIMULANT DRUGS

On April 16, 1971 the House of Delegates of the Missouri State Medical Association, meeting in St. Louis, adopted a resolution entitled "Restrictions on Use of Stimulant Drugs" which is printed herewith.

One of the implementing sections of the resolution called for the resolution to be sent to all members of MSMA along with a pledge which each member is asked to sign and return to the Association office as evidence of his participation and good faith in his resolution.

The pledge is printed on the bottom of this page. All physicians are urged to sign the pledge and mail it to MSMA headquarters.

Restrictions on Stimulant Drug Use

Whereas, The United States is faced with a widespread epidemic of drug abuse among its young people; and

Whereas, The stimulant drugs are among the most dangerous of the drugs now being extensively abused; and

Whereas, The medical usefulness of the stimulant drugs has been steadily decreasing as new and safer drugs are found that serve the same needs; and

Whereas, Massive overproduction of these stimulant drugs occurs; and

Whereas, Much of this legal overproduction has found its way into the illegal markets; therefore be it

Resolved, That the Missouri State Medical Association urges all physicians to restrict their use of amphetamines and other stimulant drugs to the treatment of specific, well-recognized medical indications, such as (1) narcolepsy, (2) hyperkinesia, (3) mild depression and (4) starter dose for obesity; and be it further

Resolved, That all physicians restrict their use of the amphetamines in the latter two conditions to no more than a two-week supply of the medication on a non-refillable basis and discourage their patients from demanding the stimulant drugs on an excessive or repetitive basis; and be it further

Resolved, That all physicians not prescribe these medications to new, unfamiliar patients, but only to patients they know and consider to be of sound temperament and attempt to utilize other safer medications and modalities of treatment prior to use of the stimulant drugs in cases involving mild depression and obesity; and be it further

Resolved, That all physicians be urged to pledge that they will not sell or dispense these medications, nor obtain these stimulant medications from mail-order drug companies; and be it further

Resolved, That the Missouri State Medical Association and all its members support the new federal efforts to strictly control the manufacture and distribution of the stimulant family of drugs by (1) placing a quota on their production and (2) incorporating the stimulants into Schedule 2 of the Narcotics Act, and encouraging state legislation in this area.

Physician's Pledge

I pledge that I will restrict the use of amphetamines and other stimulant drugs to the treatment of the four specific, well recognized medical indications and that I will observe the other restrictions as outlined in the Resolution entitled "Restrictions On Use of Stimulant Drugs" as adopted by the Missouri State Medical Association House of Delegates on April 16, 1971.

President's Challenge Accepted

On June 21, America's physicians were challenged by President Richard M. Nixon to assume a role of leadership in three areas of vital concern to our citizens and the health and well being of our society.

The American Medical Association immediately accepted the President's challenge and the full page advertisement which appears on the back side of this page was placed in the New York Times and the Los Angeles Times the next morning, June 23, less than 24 hours after Mr. Nixon's challenge.

The advertisement appeared in 15 other newspapers across the country on June 24 and 25 under AMA sponsorship.

Since the American Medical Association advertising program did not include publication of the message in Missouri, the Missouri State Medical Association with the co-sponsorship of local medical societies placed the full page acceptance of the President's challenge in the Friday afternoon, June 25 edition of the Kansas City Star and the Saturday morning, June 26 weekend edition of the St. Louis Globe-Democrat.

**MSMA
News**

Please detach this Pledge,
sign it and mail it to:

Missouri State Medical Association
Box 1028
Jefferson City, Mo. 65101

Signed

Address

We accept, Mr. President...

America's Doctors of Medicine, meeting at their one hundred and twentieth annual convention in Atlantic City, were challenged by you to assume a role of leadership in three areas of vital interest to our citizens and the health and well being of our society.

Our concern for the nation's health is our entire professional life. We live it... we work at it... it is the singular objective of our time, our lives and our energy. Your challenge is one that we understand... one that we can meet and we accept it eagerly... with enthusiasm and dedication.

You challenged us to assume the leadership in a national campaign to shape this country's attitude toward drugs... to educate America to the serious dangers of drug abuse.

We accept that challenge.

You challenged us to improve America's health care system... to design a system that will insure freedom of choice... dedication to quality... economic relief for our citizens and protection against catastrophe.

We accept that challenge.

You challenged us to contribute to the health of America... not just to its physical health, but to its mental health... to its moral health and to its character. By

our training, our education and our daily involvement with the lives of people, we are equipped to do that...

And we accept that challenge.

You asked us to give... of our time... of our energy... of our training and our dedication.

We give it gladly.

For we share your belief in America. We share your faith in our people and in our future... we share your wish that all of our people should enjoy decent standards of food, shelter, education... and health. We share your thought that the greatest reward for doing is the opportunity for doing more.

For more than one hundred and twenty years America's Doctors of Medicine have worked together to guard the nation's health, and to create the world's highest standard of medical care for all of our people and we will continue to do so.

To this we have added new programs designed to improve the delivery of health care to the poor and the underprivileged, to increase the number of doctors and to provide more care for more people through the use of physicians' assistants.

We have done much. Much remains to be done.

We accept your challenge...

America's Doctors of Medicine

The get-up-and-go summer cold and allergy pill.

Novahistine LP can help your patients get out and enjoy themselves in spite of allergic rhinitis, hay fever or summer colds. And even when nasal congestion is caused by repeated allergic episodes, Novahistine LP can usually give prompt and long-lasting relief. These continuous-release tablets contain a vasoconstrictor-antihistamine formulation that goes to work rapidly and lasts for hours. And convenient, twice-a-day dosage lets most patients enjoy relief all day and all night. Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine[®]
LP decongestant



THE DOW CHEMICAL COMPANY, Rx Pharmaceuticals, Indianapolis

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

President Nixon Challenges U. S. Physicians, Discusses Drug Abuse at AMA Convention

"America's physicians, especially those who say they are only interested in their profession and not in politics, had better get interested in politics or they will not have any profession to be interested in," President Richard M. Nixon told American Medical Association Delegates, Alternates, members and guests during an address at the AMA convention in Atlantic City on June 22.

President Nixon's address was a highlight of the annual convention. In addition to his remark on politics, the President attacked Senator Ted Kennedy's program for national health insurance without calling Kennedy by name and plugged his own program by pointing out that the Administration's program would "build on the strengths of our present system," while Senator Kennedy's program "would actually do the most to hurt American health care."

The President told America's physicians that "The health of America is in your hands, and by its health, I speak not just of its physical health—its mental health, its moral health, its character."

Mr. Nixon appealed for medicine's help in curbing drug abuse, principally through education of the public on the dangers of the drug culture. The House of Delegates answered his appeal concerning drug abuse by adopting a resolution accepting the challenge and pledging full cooperation to the President and the nation.*

Missouri was represented at the AMA annual meeting by Delegates Arthur W. Neilson, St. Louis; Hector W. Benoit, Jr., Kansas City; J. Loren Washburn, Versailles; and Stanley S. Peterson, Springfield, and by Alternates Rae W. Froelich, Lebanon; Hugh E. Stephenson, Jr., Columbia; and Robert W. Kelley, St. Louis.

Doctor Benoit lost out in a close election campaign for a position on the Council on Medical Service to C. Willard Camalier, Jr., of Washington, D. C., despite an active campaign by the entire Missouri delegation.

St. Louis Radiologist Wendell Scott again served as the Delegate for his section during the AMA Convention. Officers of MSMA in attendance included President Gerald L. Miller,

Kansas City; and President-Elect Walter T. Gunn of St. Louis.

Mrs. Frank J. Valach, Creve Coeur, President of the Woman's Auxiliary to MSMA, was in attendance at the meeting. Mrs. Valach and other members of the Missouri delegation turned carpenters during the meeting to install their environmental display at the Traymore, headquarters hotel for the Auxiliary. The exhibit, which was first put on display at the 113th Annual MSMA meeting in St. Louis in April, drew favorable comments and praise for the efforts of the Missouri Auxiliary.

The Missouri Delegation introduced two resolutions which were considered by Reference Committees and the House of Delegates.

Resolution # 6, which was sent to the AMA House by the MSMA House of Delegates, called for restrictions on the use of Stimulant Drugs. It was combined with two other similar resolutions by the Reference Committees and the following resolve on the subject was adopted: "Resolved, That physicians be urged to limit their use of amphetamines and other stimulant drugs to specific, well recognized medical indications." This was recommended in the Missouri resolution.

The House declined to adopt Missouri's suggestion for even tougher control over such stimulant drugs. The following comment was printed in the June 25 edition of the *Wall Street Journal*: "A resolution by the Missouri Delegation to the convention would have limited doctors' use of amphetamines to four situations and would have doctors prescribe only a small number of pills to patients with whom they are familiar. The House, however, brushed aside these specific proposed limitations and adopted the softer, general resolution instead."

The Missouri Delegation was commended for bringing before the House of Delegates Resolution # 98 from the MSMA Council entitled, "Drug Addiction in the Armed Forces." The House adopted a substitute resolve which stated: "Resolved, That the House of Delegates of the American Medical Association go on record as favoring the implementation of stern

* See related story on MSMA News insert, pages 590-591.

measures for the identification, prevention, diagnosis and adequate treatment of addicts within the Armed Forces with adequate provisions for the availability of proper follow-up and aftercare."

The House referred to the Board of Trustees for further consideration the final resolve of the resolution which called for support of specific legislation in this field.

The following were among the major actions of the House of Delegates during their 13 hours and 53 minutes of meetings during the 120th Annual Session:

The American Medical Association and its constituent state associations reaffirmed their support of voluntary mechanisms of review and education by physicians such as grievance committees, insurance review committees and numerous hospital review mechanisms. The House stressed that "peer review shall be considered a professional function and, as such, shall be carried out by physicians or under the sponsorship of the county and state medical societies." Also, the House called on all state and county medical societies and the AMA to take an active, responsible role in peer review and to document for the information of the public current functioning procedures and programs which are serving in the interests of delivering good medical care.

The House cleared the way for foreign medical students who completed their undergraduate work in the U. S. to participate in an approved program of U. S. graduate medical education without satisfying the internship and social service requirements of the foreign school and without being certified by the Education Council on Foreign Medical Graduates. Such students could satisfy requirements by "an academic year of supervised clinical training (such as a clinical clerkship or junior internship) prior to entrance into the first year of AMA-approved graduate medical education. The supervised clinical training must be under the direction of a medical school approved by the Liaison Committee on Medical Education."

The House approved a new class of direct membership in the AMA for interns and residents serving in AMA-approved training programs and for whom there are no provisions for membership in a county or state medical society. The By-Laws change as adopted by the House also provides for intern-resident representation in the House of Delegates. Direct membership categories also were established for service members and physicians employed by

federal agencies who are not eligible for membership in a county or state society.

The House elaborated its existing policy regarding the right of access to medical care by adopting the statement: It is the right of every citizen to have access to adequate medical care, but it is the responsibility of the citizens or of society to seek it. The American Medical Association will use all means at its disposal in an endeavor to make adequate medical care available to meet the needs of each person.

The House expressed concern over the use of the term "physician's associate" as opposed to the term "physician's assistant" to describe new health occupations. The Board and its Council on Health Manpower recommended and the House agreed that the term "physician's associate" be used only to denote another physician.

Considering the use of assistants in medical practice, delegates resolved that "the physicians may properly delegate technical procedures to an allied health worker," but affirmed the principle "that whatever privileges may at any time be granted either to allied health workers or to independent limited practitioners, by law or otherwise, such grant in no way circumscribes the physician's authority in that field and in no way restricts the practice of medicine by the physician."

Concerned with the spread of venereal disease, the House resolved "That medical societies be urged to support education of patients and the public through more extensive and more imaginative use of all available media and through school curricula, that the AMA reiterates its support and cooperation with the National Commission on Venereal Disease in order to hasten the control of these diseases and that the AMA strengthen in every way possible research efforts towards the development of vaccines for the active immunization of our population against venereal disease."

The House adopted the following statements concerning teenage pregnancy: "The teenage girl whose sexual behavior exposes her to possible conception have access to medical consultation and the most effective contraceptive advice and methods consistent with her physical and emotional needs" and "The physician so consulted should be free to prescribe or withhold contraceptive advice in accordance with his best medical judgment in the best interests of his patients. Definite effort should be made to obtain consent from the minor's parents or legal guardian whenever possible."

The House called for the encouragement of

state and local medical societies "to establish active liaison with their school systems in order to provide lectures and appropriate educational support regarding: personal hygiene, the effects of tobacco and drugs, the problem of medical quackery and the role of physicians in maintaining good health."

Dr. Charles A. (Carl) Hoffman, West Virginia, was chosen President-Elect and will become the 127th President of the AMA in June, 1972, succeeding Dr. Wesley W. Hall of Reno, Nevada, who took office on June 23.

Dr. Ralph C. Teall of California was elected Vice-President and Dr. Russell B. Roth, Pennsylvania, and Dr. J. Frank Walker, Georgia, were unanimously reelected to their posts as Speaker and Vice-Speaker of the House, respectively.

Elected to the Board of Trustees for the first time were Drs. Donald E. Wood, Indiana; Robert B. Hunter, Washington; and Jere W. Annis, Florida. Drs. John M. Chenault, Alabama; Raymond T. Holden, Washington, D. C.; and John R. Kernodle, North Carolina, were all reelected.

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Pre-Sate® (chlorphentermine hydrochloride)

Caution: Federal law prohibits dispensing without prescription.

Indications

Pre-Sate (chlorphentermine hydrochloride) is indicated in exogenous obesity, as a short term (i.e. several weeks) adjunct in a regimen of weight reduction based upon caloric restriction.

Contraindications

Glaucoma, hyperthyroidism, pheochromocytoma, hypersensitivity to sympathomimetic amines, and agitated states. Pre-Sate (chlorphentermine hydrochloride) is also contraindicated in patients with a history of drug abuse or symptomatic cardiovascular disease of the following types: advanced arteriosclerosis, severe coronary artery disease, moderate to severe hypertension, or cardiac conduction abnormalities with danger of arrhythmias. The drug is also contraindicated during or within 14 days following administration of monamine oxidase inhibitors, since hypertensive crises may result.

Warnings

When weight loss is unsatisfactory the recommended dosage should not be increased in an attempt to obtain increased anorexic effect; discontinue the drug. Tolerance to the anorectic effect may develop. Drowsiness or stimulation may occur and may impair ability to engage in potentially hazardous activities such as operating machinery, driving a motor vehicle, or performing tasks requiring precision work or critical judgment. Therefore, such patients should be cautioned accordingly. Caution must be exercised if Pre-Sate (chlorphentermine hydrochloride) is used concomitantly with other central nervous system stimulants. There have been reports of pulmonary hypertension in patients who received related drugs.

Drug Dependence Drugs of this type have a potential for abuse. Patients have been known to increase the intake of drugs of this type to many times the dosages recommended. In long-term controlled studies with the high dosages of Pre-Sate, abrupt cessation did not result in symptoms of withdrawal.

Usage In Pregnancy The safety of Pre-Sate (chlorphentermine hydrochloride) in human pregnancy has not yet been clearly established. The use of anorectic agents by women who are or who may become pregnant, and especially those in the first trimester of pregnancy, requires that the potential benefit be weighed against the possible hazard to mother and child. Use of the drug during lactation is not recommended. Mammalian reproductive and teratogenic studies with high multiples of the human dose have been negative.

Usage In Children Not recommended for use in children under 12 years of age.

Precautions

In patients with diabetes mellitus there may be alteration of insulin requirements due to dietary restrictions and weight loss. Pre-Sate (chlorphentermine hydrochloride) should be used with caution when obesity complicates the management of patients with mild to moderate cardiovascular disease or diabetes mellitus, and only when dietary restriction alone has been unsuccessful in achieving desired weight reduction. In prescribing this drug for obese patients in whom it is undesirable to introduce CNS stimulation or pressor effect, the physician should be alert to the individual who may be overly sensitive to this drug. Psychologic disturbances have been reported in patients who concomitantly receive an anorectic agent and a restrictive dietary regimen.

Adverse Reactions

Central Nervous System: When CNS side effects occur, they are most often manifested as drowsiness or sedation or overstimulation and restlessness. Insomnia, dizziness, headache, euphoria, dysphoria, and tremor may also occur. Psychotic episodes, although rare, have been noted even at recommended doses. **Cardiovascular:** tachycardia, palpitation, elevation of blood pressure. **Gastrointestinal:** nausea and vomiting, diarrhea, unpleasant taste, constipation. **Endocrine:** changes in libido, impotence. **Autonomic:** dryness of mouth, sweating, mydriasis. **Allergic:** urticaria. **Genitourinary:** diuresis and, rarely, difficulty in initiating micturition. **Others:** Paresthesias, sural spasms.

Dosage and Administration

The recommended adult daily dose of Pre-Sate (chlorphentermine hydrochloride) is one tablet (equivalent to 65 mg chlorphentermine base) taken after the first meal of the day. Use in children under 12 not recommended.

Overdosage

Manifestations: Restlessness, confusion, assaultiveness, hallucinations, panic states, and hyperpyrexia may be manifestations of acute intoxication with anorectic agents. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension, or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma.

Management: Management of acute intoxication with sympathomimetic amines is largely symptomatic and supportive and often includes sedation with a barbiturate. If hypertension is marked, the use of a nitrate or rapidly acting alpha-receptor blocking agent should be considered. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendations in this regard.

How Supplied

Each Pre-Sate (chlorphentermine hydrochloride) tablet contains the equivalent of 65 mg chlorphentermine base; bottles of 100 and 1000 tablets.

Full information is available on request.

take a new
look at
Pre-Sate[®]
(chlorphentermine
HCl)

the increasingly practical
appetite suppressant

low potential for:

- ☐ stimulatory 'jolt'
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Pre-Sate promotes normal patterns of food intake and is a safe, effective supplement to your total program of caloric reduction

**Pre-Sate — a short-term adjunct...
not a substitute...to your total
program of weight reduction**

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The Health Care Foundation of Missouri

By

HECTOR W. BENOIT, JR., M.D., Kansas City

Chairman of the Board of Directors

For the information of all members of the Missouri State Medical Association, MISSOURI MEDICINE presents the complete transcript of the address delivered at the Kansas City Blue Shield Seminar at Lake Ozark, Mo. on July 19, 1971 by Dr. Hector W. Benoit, Jr. In his presentation, Doctor Benoit spells out in detail the purpose of the HCFM, its organizational structure, its functions and its activities to date.

IN THE SPRING OF 1969, recognizing the need for professional review of services within the medical profession as being urgently called for by such varied sources as the American Medical Association, the Congress of the United States, the insurance industry and the public, the Council of the Missouri State Medical Association created an Ad Hoc Committee to study the problem of peer review and report to both the council and the House of Delegates in the spring of 1970. This Committee studied the varied geographical, sociological and educational facets of the problems of medical care in detail as they related to the state of Missouri. Other areas of peer review activity across the country were likewise studied in an attempt to obtain advice and experience that would be applicable to the special needs of the state of Missouri.

Now in 1971, it is abundantly clear to all that some type of national health program will be created by the Congress, probably to be put into law by 1972. While the precise form such a program will assume is still in the developmental and indecisive stage, such a program is receiving support from virtually all political factions, including the American Medical Association, the American Osteopathic Association and the American Hospital Association. It is evident that some provision for review and control of the quality, appropriateness and cost of medical services rendered will be built into such a program. There is no real question any longer that physicians' services will come under intensive review. The only question which remains is *by whom* such review will be conducted. The oft-quoted statement that *if the doctors don't do it, someone else will*, is all too clear.

The Missouri State Medical Association is to be commended for having the foresight to study this problem and for taking appropriate steps to provide the answer to the question as to whom is going to review physicians' services.

The Ad Hoc Committee, to which I referred earlier, reported to the House of Delegates of the Missouri State Medical Association in April of 1970, and that body directed the Council of the Missouri State Medical Association to implement a peer review mechanism in keeping with the report of the Committee. In August of 1970, after conferring with the Missouri Association of Osteopathic Physicians and Surgeons and obtaining that organization's strongly expressed desire to participate, the leaders of the two associations caused to be drafted a charter application for the creation of a nonprofit corporation in the state of Missouri known as The Health Care Foundation of Missouri. This charter was granted by the Secretary of the state of Missouri in August of 1970.

I quote from the by-laws of the Health Care Foundation: "The business of this corporation will concern itself with the statewide peer review mechanism for health care of the state and the regulation of same, the accumulation and utilization of information gathered from this peer review effort for the education of the public and the physicians of the state, and negotiation, mediation and discipline as may be appropriate."

The Foundation incorporates both M.D.'s and D.O.'s in its structure, starting with the Board of Directors, through the central coordinating committee, down to the panel review committees.

The Foundation will function as an arm of the Missouri State Medical Association and the Missouri Association of Osteopathic Physicians and Surgeons. The membership consists of administrative members and participating members. The administrative members are the 15 voting M.D.'s of the Council of the Missouri State Medical Association and the six voting members of the Board of Trustees of the Missouri Association of Osteopathic Physicians and Surgeons. All other accredited members of either the MSMA or the MAOPS are eligible for participating membership in the Foundation.

The members of the Board of Directors of the Health Care Foundation are elected for three-year terms by the administrative members, there being six M.D.'s and three D.O.'s on the Board. At least two M.D.'s and one D.O. must be participating members. A statewide Central Coordinating Committee, again consisting of nine members, six M.D.'s and three D.O.'s is appointed by the Board to supervise and direct the statewide peer review mechanism. They serve two-year terms and are eligible for reappointment.

The state has been divided into five panel areas—east, west, north central, southwest and southeast. Each is serviced by a Panel Review Committee of seven members, consisting of five M.D.'s and two D.O.'s. Each panel committee will attempt to accommodate by its representation the problems that exist in both rural and urban areas. At the present time, the western panel area now has two complete panel review committees because of the work load imposed upon this area. It may be necessary in the future to increase the number of committees in other panel areas as the activities of the Foundation progress.

There have been appointed by the specialty societies across the state and the Missouri Academy of Family Practice, one consultant in each specialty (with the exception of urology) to each panel area. These five consultants in any one specialty constitute a statewide specialty committee. The Panel Review Committee will refer, when necessary, appropriate problems in a given specialty to the statewide specialty review committee through its area consultant for an opinion regarding the quality of care in a given instance or any question regarding a fee charged.

Material may be funneled into the Health Care Foundation's mechanism for review through its central office in Jefferson City from any of several sources: patients, physicians, insurance carriers or institutions providing health care.

Each Panel Review Committee will meet once a month to review the problems forwarded to it. Actions taken will be reported to the complainant and to the Central Coordinating Committee. All initial reviews conducted by the Health Care Foundation will be done anonymously, without identification of patient or physician, unless one of these two is the complainant *per se*. If a decision is rendered in support of a physician and the complainant subsequently brings suit against the physician, the latter will be supported by expert testimony in his behalf. By the same token, if the physician is not supported in his claim for reasons of overcharging or inappropriateness of treatment, then the Health Care Foundation will support the plaintiff in the event of subsequent legal action.

When a complaint is received, it will be reviewed, provided the matter cannot be handled at the local level by existing grievance committees or insurance committees. If there is an indication that a law suit has already been filed and litigation is in progress, then the matter will *not* be reviewed by the Health Care Foundation under these circumstances.

While the reasons for peer review as espoused by various groups may differ, the primary reasons motivating the Missouri State Medical Association and the Missouri Association of Osteopathic Physicians and Surgeons in activating the Health Care Foundation are to elevate and protect the quality of medical care in Missouri; second, to identify educational deficiencies in the delivery of medical care and, third, to control costs—in that order of priority.

Governmental agencies and insurance carriers have been primarily interested in the cost aspects of health care. The Health Care Foundation is only interested in cost control as a by-product of insuring good quality of medical care in order that the public will get the most for its health care dollar. That savings will accrue from better quality care is a *sine qua non* well demonstrated by other peer review activities in years gone by.

Another major concern of the two physician organizations in the state of Missouri was to create an organization which would satisfy the recognized need for peer review and to insure that such professional review would be done by the professionals involved. They are the only ones competent to do such review. As Richard Wilbur, M.D., the Assistant Executive Vice-President of the American Medical Association, so aptly stated, "Congress is demanding it, our patients deserve it and we as physicians need it."

So much for the whys, hows and wherefores of

the Health Care Foundation of Missouri. Now to identify some of the problems involved in what the Foundation is trying to do since it was formally activated late in December of 1970.

Financing is and continues to be a problem.

The organization of the various committees who are now serving was left to the Missouri State Association and the Missouri Association of Osteopathic Physicians and Surgeons prior to the actual creation of the health care foundation. Each councilor district of the Missouri State Medical Association and each district of the MAOPS, through its representatives, were solicited for names of people who would be capable of serving on the peer review panel committees, their permission was obtained and, after due consultation, they were appointed by their respective state associations. These appointments were forwarded to the Board of Directors of the Health Care Foundation when it came into existence. All of the review committees have functioned so far with varying degrees of success. With experience and further assistance, they should increase their efficiency over the next several months. At the present time, appropriate staff for each of the panel review committees is being recruited and hired, and will operate under the direction of the very knowledgeable and efficient staff in the central office of the Health Care Foundation in Jefferson City. Each staff person in a given Panel Review Committee also will be responsible to the chairman of that panel review committee.

One of the biggest problems that the panel review committees and the insurance carriers have faced has been the lack of available guidelines in dealing with specific problems. Such guidelines are particularly needed for identification of the adequacy of treatment and utilization. We recently have acquired an elaborate set of guidelines developed by the Hennepin County Foundation in Minneapolis, Minn., which we are currently using on a temporary basis as an initial point of reference for our committee activities. However, a meeting was held of the panel review committee chairmen and all members of the Central Coordinating Committee in conjunction with the Board of Directors. It was everyone's feeling that these guidelines, as submitted to us, need not only modification, but in some instances, amplification to satisfy the statewide activities in Missouri. Accordingly, during these summer months, each specialty society and the Missouri Academy of Family Practice have been asked to review those segments of the guidelines relating to their fields of practice and provide the Central Coordinating Committee with writ-

ten suggestions for needed changes and amplification of the guidelines. It is anticipated that these revisions will be available for use in late September of 1971.

You will be interested to know that these guidelines deal only with the appropriateness of diagnostic procedures, treatment and utilization factors for a large list of diseases commonly seen in both office and hospital practice, without any mention of fees.

Hopefully, when these guidelines are finalized, it will make it much easier for the panel review committees to function and for the computers of the various third party carriers to identify questionable quality and overutilization, as separate from their usual strictly fee-oriented kick-outs.

The Central Coordinating Committee, with the advice of the panel review chairmen, also has developed a transmittal form which is now being made available to all carriers so that they will be better advised as to what information is necessary before filing a problem with the Health Care Foundation for review. This will greatly augment the efficiency of each review committee when they meet.

There are certain deficiencies apparent to me in some of the by-laws statements as they now exist in their original form regarding membership. I have directed the By-Laws Committee of the Board to restructure the membership section of the original by-laws for purposes of clarity and reasonableness.

The experiences of other health care foundations, whether they be HMO'S, claims review groups or strictly peer review organizations such as ours, have indicated that the need for discipline of an errant physician has been indeed rare. The problem of fees is seldom a major problem. As a matter of fact, in our own relatively limited experience to date, the review decisions by the various panel groups across the state have reflected opinions in favor of the physician in about 85% of instances. The remaining 15% have been considerably more directed towards questioning the quality of the care provided rather than the cost of the care provided. Some of the more outstanding problems reflected by our review to date regarding quality of care have had to do with multiple laboratory procedures without apparent appropriate indication, overutilization of hospital and office visits and, particularly, overuse of injectables.

It is hoped that when diverse patterns of care become quite evident, the physician will be called in to have explained to him the attitudes of the panel review committees and the Central Coordinating Committee as an educational effort

to rectify certain abnormal patterns of care as they may present themselves. The experience of others has indicated that this has had a highly salutary effect upon the mode of practice of certain physicians who, for educational reasons, may have fallen into bad habits. It also is anticipated that certain geographical areas of educational deficiency may be identified, not relating to one specific physician but to groups wherein a certain disease entity appears to be receiving less than adequate or unnecessary care. Having once identified these deficiencies, there are educational resources across the state through both state physician organizations, the medical schools in the state, etc., to help rectify any such educational needs which become apparent.

There is one other committee created by the By-Laws of the Health Care Foundation known as the Judicial Committee. This again consists of six M.D.'s and three D.O.'s elected by the administration members from lists of names acquired through the regional representatives of both state associations. These are physicians beyond reproach in their personal and professional integrity. If in the opinion of the Central Coordinating Committee, after repeated attempts to alter bad medical practices or bad financial practices by a physician, there have been no signs of improvement, then he will be notified that he will have a hearing before the Judicial Committee wherein due process will be extended to him including the presence of his own legal counsel. Any disciplinary action that is recommended by the Judicial Committee will be reported to the appropriate state physician association and to the State Board of Registration for the Healing Arts for action as appears necessary by that body. It is anticipated that the Judicial Committee will have very little to do.

Although still in its infancy and crawling as it learns to walk, those of us who have been asked to operate the Health Care Foundation are enthusiastic and optimistic about its future and the improvement of medical care which should reflect on all the people of Missouri as the result of this long overdue professionally-run peer review function. I would like to emphasize at this point to the physicians in the audience that this Health Care Foundation is here to protect *you*. If you feel you have been unjustly treated by an insurance company or a governmental carrier, we are anxious to have your complaint and review it for you and support your position if it be so justified.

PHONOCARDIOGRAPHY PULSE TRACINGS VECTORCARDIOGRAPHY A WORKSHOP

September 27-30, 1971

This is an intensive four-day program covering in detail the field of phonocardiography and pulse tracings and vectorcardiography. Emphasis will be placed on the values and limitations of these techniques and related areas as applies to the patient's diagnostic problems. Two days will be dedicated to phonocardiography and pulse tracings and two days for vectorcardiography. The morning sessions will be devoted exclusively to individual analysis of tracings by the participants under the orientation of the local and guest faculties. This program is intended for those who wish a close and detailed exposure to the values and the limitations of these techniques.

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Program Director

Alberto Benchimol, M.D., Director
Institute for Cardiovascular Diseases
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Guest Speaker

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Hahnemann Medical College and Hospital
Philadelphia, Pennsylvania

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Mr. William Nelligan
Executive Director
American College of Cardiology
9650 Rockville Pike
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The Council Reports

Meeting of June 5-6, 1971

E. A. Stricker, M.D., St. James, Chairman, called the meeting to order. Those present were Drs. Stricker; John N. Martin, St. Joseph; Lysle M. Bach, Hannibal; Max S. Franklin, St. Louis; Louis P. Hetlage, Troy; James C. Cope, Columbia; William D. Bradshaw, Clinton; R. Allen Chandler, Kansas City; Howard J. McAlhany, Springfield; Eugene T. Hansbrough, Poplar Bluff; Gerald L. Miller, Kansas City; Walter T. Gunn, St. Louis; John I. Matthews, Jefferson City; Joseph L. Fisher, St. Joseph; Stanley S. Peterson, Springfield; J. Loren Washburn, Versailles; Hector W. Benoit, Jr., Kansas City; Arthur W. Neilson, St. Louis; Robert W. Kelley, St. Louis; William D. Mayer and William C. Allen, Columbia; Herbert R. Donke, Jefferson City; Messrs. John W. Noble, Kennett; Hollister Smith, St. Louis; Gary L. Schnedler, Springfield; Allen D. Smith, Kansas City; Ray McIntyre, Tom P. Fox, Bob Carroll and Royal O. Cooper, Jefferson City, Staff.

The Chairman requested approval of the minutes of the last two meetings of the Council on April 14 and April 18, 1971. On motion of Dr. Franklin, duly seconded, the minutes were approved as distributed.

REPORT OF THE SECRETARY

Mr. McIntyre reported on a number of interesting meetings which he attended recently. He stated that on May 1, he attended a mid-states area conference of Executive Secretaries of state and larger county medical societies at St. Louis Medical Society headquarters. The representatives from nine states who attended brought together a number of people with similar problems. On May 5-6, he attended the annual meeting of SAMA (Student American Medical Association) at the Chase Hotel in St. Louis and stated that it was revealing to hear some of the comments made by some of our young physicians-to-be. He said Dr. Paul Young of Kansas City also attended this meeting.

Mr. McIntyre reported that on May 14, he, Bob Carroll and Royal O. Cooper attended a dinner at the St. Louis Medical Society for Representatives and Senators in the Missouri Legislature, and their wives from the St. Louis area. They were invited for an informal get-together which gave the physicians another opportunity to become better acquainted with their legislators. He reported that other county medical societies in the state also have done this. On June 2, he attended the annual meeting of the Licensed Practical Nurses Association at Tan-Tar-A. All of the practical nurses in the state who are in training were invited to attend this meeting. All were in uniform, had a Grand March, were introduced and were given a sales talk on what the practical nurses association is doing. He said he was quite impressed with this type of program and was sure it would help in getting these future nurses to become members of that organization. One entire day was devoted to them, and it was his thought this idea could be used in organized medicine. He presented figures on the recent MSMA Annual Session and stated that only 617 members were registered

and that we need to introduce ideas to improve the attendance.

He requested that Mr. Cooper comment on the survey of all members of the Association which is being conducted by the Commission on Medical-Legal Affairs. Mr. Cooper stated that the response has been very good, that approximately 1,900 replies have been received to date and that we should receive at least a 50% return. He said a number of interesting comments were received, some on malpractice and some on pre-trial screening panels.

Mr. McIntyre called attention to a letter from the Missouri Regional Medical Program. He explained that MRMP has a Liaison Committee made up of representatives of various organizations interested in health care in Missouri, the purpose of which is to review the needs and projects that are proposed to MRMP and make recommendations to them. He stated that MSMA has been a member of this committee for some time and that Dr. Byron M. Stuart has been our representative. The letter suggested that each member-organization appoint an alternate with the right to vote to take the place of the delegate in his absence. Mr. McIntyre indicated that an alternate has never been appointed, but that Bob Carroll has attended all of these meetings. He suggested also that Dr. Stuart have the official vote and in the absence of Dr. Stuart, that Bob Carroll have the right to vote. He requested Council-approval to send an official letter appointing Bob Carroll as the alternate in this regard.

Dr. Hansbrough moved that a letter be written to MRMP appointing Bob Carroll as official representative with voting privileges in the absence of Dr. Stuart. (No action was taken at this time. This item was held for action at the Summary Session held immediately following the morning business session.)

APPOINTMENT OF COUNCILOR ADVISORS TO COMMISSIONS

Mr. McIntyre indicated that the By-Laws state, "The Chairman of the Council shall appoint each year an appropriate Councilor to serve as advisor to each respective Commission." The following Councilors were appointed by Dr. Stricker, Chairman of the Council, for the year 1971-1972: Dr. Hetlage for the Commission on Medical Economics, Third Party Medicine and Governmental Relations; Dr. Hansbrough for the Commission on Continuing Education and Health Manpower; Dr. McAlhany for the Commission on Medical-Legal Affairs; Dr. Martin for the Commission on Interspecialty Medicine; and Dr. Bradshaw for the Commission on Public Affairs.

TREASURER'S REPORT

Dr. Franklin presented the Treasurer's Report in the absence of Dr. Gulick. He presented specific figures, but stated that the financial picture was not complete because of outstanding bills for the Annual Session. He also indicated that the raise in postage rates and other increased costs will affect the Budget. However, with the

income from dues collected, MSMA is in good financial condition. On motion of Dr. Bradshaw, duly seconded, the Treasurer's Report was accepted.

APPOINTMENT OF FINANCE COMMITTEE

The Chairman appointed the following members to the Finance Committee for 1971: Drs. Charles R. Gulick, St. Louis, Chairman; Gerald L. Miller, Kansas City; and Howard J. McAlhany, Springfield.

INTRODUCTION OF DIRECTOR, MISSOURI DIVISION OF HEALTH

The Chairman asked Dr. Bradshaw to introduce Dr. Herbert R. Domke, the new Director of the Division of Health of Missouri. Dr. Domke was welcomed by the Council and gave a short report on some of the problems confronting the Division of Health, primarily in the area of health manpower over the state. He said the Division of Health is promoting meetings to study the matter of providing more physicians for Missouri, a priority program. He stated that the Olson report had not been brought up to date, but that a committee is working toward developing a program to keep it on a current basis. He said that the State Board of Healing Arts had sent out a second card, along with the biennial registration card, which calls for simple information, such as, whether or not a physician is practicing, retired, in training or expects to practice in Missouri. He said the cards are to be returned to the State Board and it is hoped that they will provide accurate information. He stated he hopes to establish a unit within the Division of Health devoted to Health Manpower and indicated it would be desirable to coordinate efforts to retain the already well-developed programs of MSMA and the Osteopathic Association for physician placement. He stated that the needs are obvious and, in time, he would like to present a proposal to develop a coordinating Committee of MSMA, Osteopathic Association, Division of Health and, possibly, the Medical Schools in order to do everything they can to develop an overall program on physician placement. He expressed the hope that the Council would endorse his proposal.

The Chairman thanked Dr. Domke for his suggestions and action was deferred until the meeting of the Summary Session.

REPORT OF LEGAL COUNCIL

Mr. Noble gave a brief report on two matters that are pending. One is the Curteman case which is in the Supreme Court where a hearing may be held soon; the other is in regard to a tax matter with IRS. On the latter, a preliminary district conference was held with no decisions. The matter now will be discussed in Appellate Conference in Kansas City on June 10. After further discussion, on motion of Dr. Hetlage, duly seconded, the report of Legal Counsel was approved.

MATTERS REFERRED TO THE COUNCIL BY THE 1971 HOUSE OF DELEGATES

At the 1971 House of Delegates, a number of items were referred to the Council for further action or implementation. Following is a report of the Council Action on these matters:

The House referred the *report of the Ad Hoc Blue Shield Committee* back to the Council with a recommendation that a new Ad Hoc Committee be appointed to

continue the consideration of the realistic merits and problems in the Kansas City Blue Shield and Missouri Medical Service of St. Louis to consider further recommendation of the present committees, in conjunction with representatives of the two Blue Shield plans, all with the interest of improving benefits to subscribers and rapport with physicians. This was referred to the Commission on Medical Economics.

Resolution No. 13, entitled "Method of Reimbursement to Hospitals by Blue Cross," was referred to the Council for study of the questions raised in the resolution and additional investigation as to the method of Blue Cross reimbursement. This was referred to the Commission on Medical Economics.

Resolution No. 20, entitled "Outpatient Medicare Coverage of Patients With Emotional Problems," was sent to the Council for referral to the appropriate commission for further study and recommendations. This was referred to the Commission on Medical Economics.

Resolution No. 33, entitled "Restrictions on the Use of Stimulant Drugs," called for the resolution to be sent to all members of the MSMA in the form of an accompanying pledge which each member be asked to sign and return as evidence of their participation and good faith in the resolution. After discussion, on motion, duly seconded, it was agreed this pledge be printed as part of the Journal to be signed and returned to the MSMA office.

Resolution No. 36, entitled "Introduction of Resolutions," was not adopted by the House, but the House recommended that it be referred by the Council to an appropriate committee for possible implementation at the next Annual Session. This was referred to the standing Committee on Constitution and By-Laws.

Resolution No. 16, which seeks to provide for a general referendum of Association members upon any question pending before the House of Delegates was not adopted, but was referred to the standing Committee on Constitution and By-Laws to study with the conclusion that the matter may again be brought before the House at next year's Annual Session. This was referred to Constitution and By-Laws.

The House also called for a study concerning the need for a student membership classification. This also was referred to the standing Committee on Constitution and By-Laws with a recommendation from the Council that student membership may be included under the Associate Membership classification in the MSMA By-Laws.

The House rejected *Resolution No. 35*, which opposed Health Maintenance Organizations to the exclusion of other delivery systems, but the House voted in favor of an active and educational program to disseminate all available information on HMO's and other health care systems to the medical profession and to the public. This was referred to the Commission on Public Affairs.

The House adopted *Resolution No. 6* which calls for the Association's Medical-Legal Affairs Commission and Legislative Committee to be instructed to design and seek sponsors for a pilot medical examiner act in Missouri.

Resolution No. 1, which calls for support of SB 9 and HB 301 regarding county hospital boards and staff, was adopted by the House. It was reported by Mr. Carroll that the bills have been actively supported. HB 301 has been passed.

The House adopted *Resolution No. 12*, which calls for support of HB 238 concerning blood alcohol levels to determine drunken drivers. Mr. Carroll reported the bill has been supported but is dead for this session.

The House adopted *Resolution No. 25* which called for a change in Missouri law to allow licensed practical nurses who meet the qualifications of their local hospital staffs be permitted to administer fluids intravenously under the staff doctors supervision and orders. This was referred to the Legislative Committee.

Resolution No. 5, which calls for legislation to provide immunity for physicians in peer review capacity, was adopted by the House and referred to the Legislative Committee.

The House adopted a *supplemental report on "Alcoholism and Drug Abuse Education"* which resolved that MSMA urge insurance companies in the state to offer more coverage in their policies for the illnesses of alcoholism and drug abuse, that larger corporations set up alcoholism and drug abuse programs and that general hospitals accept alcoholics as they would anyone with another disease. This was referred to the Commission on Public Affairs.

Resolution No. 3 was adopted by the House. This resolution, entitled "Retention of Private Health Care System," was referred to the Commission on Medical Economics, Third Party Medicine and Governmental Relations.

Resolution No. 7, entitled "Blue Shield of Kansas City," was adopted by the House with the recommendation that MSMA commend Blue Shield of Kansas City for its national leadership in developing and implementing a broad comprehensive benefit plan for both group and nongroup subscribers. After discussion, on motion of Dr. Fisher, duly seconded, it was agreed to forward this information to Kansas City Blue Shield and not have it referred to a Committee or Commission.

Resolution No. 14, entitled "Subscriber Representation on Blue Shield Boards," was adopted by the House. The Council referred this resolution to the Commission on Medical Economics.

The House adopted *Resolution No. 24*, entitled "Labeling of Prescription Drugs." This was referred to the Commission on Public Affairs.



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Resolution No. 32 concerning Emergency Medical Service was adopted by the House and calls for MSMA to support SB 238 calling for the licensing of ambulance service and personnel in Missouri and that members of MSMA are to work with their local ambulance service to insure they meet the proper standards. This was referred by the Council to the Commission on Public Affairs and Legislative Committee.

PRESIDENT'S REPORT

Dr. Miller stated that the MSMA is supporting Richard A. Sutter, M.D., St. Louis, for appointment to either the National Advisory Committee on Occupational Safety and Health or the National Commission on State Workmen's Compensation Laws. This appointment is made by the President of the United States. Dr. Miller stated that a letter of recommendation was sent to President Nixon on May 26, 1971 over his signature.

Dr. Miller reported that he and members of the staff attended a meeting in Las Vegas where Foundations and Peer Review were discussed.

He said much was learned from the San Joaquin County (California) regarding their Foundation which was the first to be established. He said it was a most informative session.

He reported on his attendance at the Illinois State Medical Society annual meeting and said, for the first time, ISMS held its meeting outside of the Chicago area. He mentioned that next year the Illinois State Society will involve the Chicago Medical Society in its Annual Session and will return to Chicago for the 1972 meeting.

He said that the Illinois Society was disturbed at the number of resolutions being presented from the floor of the House and which took up too much time and made it difficult for the Reference Committees in their deliberations. They proposed a step similar to what MSMA proposes, i.e., to set a time for all resolutions to be presented. They also made preparation to involve students in their deliberations and considerations in the House of Delegates. Dr. Miller said that on the last day, the president of SAMA addressed the House. He also mentioned that Illinois plans to have a Foundation based on the San Joaquin plan. He stated the ASIM (American Society of Internal Medicine) helped to contribute to the program of the Illinois State Medical Society.

He said that he attended a Peer Review meeting which followed the Illinois State meeting in Chicago and spent a day and a half in a most informative session.

Dr. Miller then referred to action taken last May at the Council meeting regarding procedural medical terminology and the steps that would eventually have to be taken. He said we must now reconsider the matter of replacing the four digit system with the five digit system and this should be done now. We must consider the code method adopted by the AMA *Current Medical Terminology and Current Procedural Terminology*. He stated that we must accept this responsibility and, perhaps, ask the medical schools to participate in this educational effort to make this step forward and establish a uniform medical and procedural terminology policy.

COMPREHENSIVE HEALTH PLANNING

Dr. Robert Kelley, Chairman of the Governor's Advisory Council on Comprehensive Health Planning, gave a brief report on developments concerning CHP in Missouri. He spoke about several area planning agencies that need support. He said that the Northeast Missouri area Health Planning Agency is having problems. He said

(Continued on page 644)



WASHINGTON

The Congress has been asked by the Administration to authorize an additional expenditure of \$155 million for the control of drug addiction. In his special message to the House and Senate, President Nixon said: "If we cannot destroy the drug menace in America, then it will surely destroy us."

The Administration's program would:

- Make Veterans Administration facilities available to all former servicemen in need of drug rehabilitation regardless of the nature of their discharge and provide \$14 million for this program.

- Seek \$105 million from Congress to be used solely for treatment and rehabilitation of drug addicts.

- Request an additional \$10 million to improve education programs on dangerous drugs.

- Request special legislation permitting the government to use information obtained by foreign police and other technical measures to make it easier to prosecute drug pushers.

- Ask for an additional \$25.6 million for the Treasury Department to expand efforts against smugglers.

- Request \$2 million to expedite research and development of detection equipment and techniques.

- Request \$2 million for the Agriculture Department to develop herbicides that would destroy narcotics-producing plants.

- Request \$1 million for assistance to other nations in training law enforcement officers.

Implicit in the Presidential drug control proposal is the endorsement of the use of methadone in the treatment of Vietnam veterans addicted to heroin. This high level sanction of the heretofore somewhat controversial and experimental use of methadone marks a turning point in the nation's attempt to rehabilitate addicts. Observers believe the decision to make wide-scale use of methadone was influenced by official recognition of the discouraging low "cure" rate from other approaches to the problem.

Named by the President to head the new drug control program was Jerome H. Jaffe, M.D., a Chicago psychopharmacologist and director of the Illinois State Drug Abuse Program. Doctor Jaffe, an advocate of the methadone treatment method, will serve as a White House consultant until the new agency is organized.

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AMA Statement on Venereal Disease

In view of the alarming increase in reported cases of infectious syphilis and because gonorrhea is now pandemic in the United States, the Council on Environmental and Public Health, American Medical Association, has prepared the accompanying statement for the information and guidance of medical societies.

The American Medical Association Council on Environmental and Public Health reports that gonorrhea ranks first and syphilis third among the reportable communicable diseases in the United States. For the year ending June 30, 1970, infectious syphilis rates were 8% higher nationally than a year earlier, with annual increases spread over 33 states and an estimated incidence between 70,000-80,000 reported cases; there are 250,000 cases of all forms of syphilis estimated to be diagnosed and treated each year.

At the same time, gonorrhea morbidity exceeded 573,000 reported cases. Gonorrhea is pandemic in the United States, with an estimated 2 million cases.

The Council urges medical societies to acquaint their membership with the growing and alarming dimensions of the VD problem. Physicians should take all appropriate measures to reverse the rise in venereal disease and bring it under control.

Physicians in private practice treat approxi-

mately 80% of the syphilis and gonorrhea that comes to diagnosis but report to public health departments only one out of every eight cases of syphilis and one out of every nine cases of gonorrhea they treat. Physicians should assist public health departments by reporting the VD cases they treat. Medical societies are urged to cooperate and give broad support to public health authorities. Much effort must still be made by health departments and medical societies to foster mutual trust so that public and private medicine can work effectively for the control of both syphilis and gonorrhea.

The Council also urged medical societies to continue efforts for the enactment of state laws to permit physicians legally to treat VD cases of minors without obtaining parental consent. Currently, 35 states have laws and 6 states have attorneys general's opinions permitting treatment of minors for VD without permission of parents. Such sanction is not provided in the states of Alabama, Arizona, Georgia, Mississippi, Minnesota, Missouri, Ohio, Wisconsin, and Wyoming.

There are also 11 states which do not have laws or regulations requiring all serological laboratories to report reactive specimens by name of patient and physician to the health department. They are Alaska, Arkansas, Colorado, Idaho, Indiana, Louisiana, Maine, Massachusetts, North Dakota, South Dakota, and Washington. Experience has shown that many serologic laboratories refuse to report names of reactors to the health department until it is required by law or regulation.

The American Medical Association is making VD a national theme for Community Health Week-1971, with suggested dates of October 17-23. Informational and promotional material will be available for medical societies. The AMA publication *PR Doctor*, January, 1971, featured the problem of venereal disease, which included reports of excellent programs underway by state medical societies.

The Council encourages the publication of more articles in professional journals on venereal disease and its control for the guidance of the profession. Medical societies are asked to support education of patients and the public through more extensive and imaginative use of all available media and through school curricula.





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Dr. Doyle C. McCraw, Bolivar, a Past-President of the MSMA, has been named to the Missouri Regional Medical Program Advisory Council by **Gov. Warren E. Hearnes**. He will succeed **Dr. Walter W. Tillman, Jr.** of Springfield, who resigned. The Advisory Council establishes policy and plans to carry out the major mission of the medical program, which is to shorten the time lag between discovery and application in making new medical discoveries available to heart, stroke and cancer patients, according to the Governor's office.

The **St. Louis County Medical Society's** School Health Committee has presented companion plaques expressing appreciation for long years of effective service to **Dr. Guy N. Magness** and **Dr. Ivan Nicholas**. Doctor Magness, a Past-President of the MSMA, has served as Chairman of the Committee. Doctor Nicholas is retiring superintendent of the Ladue schools. Both have served on the Committee since it was created in 1957.

Members of the Clay County Medical Association and the Woman's Auxiliary recently visited the office of **Dr. Charles Wheeler**, Mayor of Kansas City, to present \$200 to the Mayor's Fund for the Kansas City Philharmonic Orchestra. In the picture, Mayor Wheeler (*left*) accepts the check from **Dr. Donald Kuenzi**, President of the Medical Association, and **Mrs. Carl Slaughter**, President of the Auxiliary.



"The Physicians Recognition Award" of the American Medical Association has been made to **Dr. Albert M. Estes** of Cape Girardeau and **Dr. D. H. Giesler** of Oseola. The award plaque states that "in pursuit of excellence in the profession of medicine," the recipient "has fulfilled requirements for the Physician's Recognition Award in continuing medical education" for three years. Both Drs. Estes and Giesler engaged in at least 150 hours of advanced medical training in each of the three years.

Dr. Glenn L. McElroy, Columbia, was among six alumni of Central Methodist College honored at the college's Alumni Day in Fayette recently. He received a plaque in honor of his contributions to the medical profession, particularly in the field of orthopedic surgery. Doctor McElroy has been in private practice in Columbia since 1951.

Dr. William H. Ames, St. Joseph, was elected president and **Dr. Richard R. Cohle**, Carthage, was elected to serve a three-year term on the Board of Directors at the 22nd annual meeting of the Missouri Heart Association. The meeting was attended by more than 80 Heart Fund volunteers, directors and members of the Association and staff and other guests representing official and voluntary health agencies and medical and allied professions from all over the state. **Dr. William W. L. Glenn**, president of the American Heart Association, was the principal speaker.

From the Medical Schools



UNIVERSITY OF MISSOURI



Dr. Young

Dr. Paul R. Young of Kansas City has been appointed medical director of the Continuing Education Program for health professionals offered by the University of Missouri-Columbia.

To keep practicing physicians' nurses and other health care workers abreast of new medical information, the University Extension

Division and Medical Center cooperate on a series of lectures and conferences. Doctor Young will have a major role in the planning of such programs with Dr. Gail Bank, currently executive director of Continuing Medical Education, who represents the Extension Division in carrying out the program.

Dr. Young, who held the position of director of the Family Practice Program at Research Hospital in Kansas City until June 30, also will have an academic appointment in the Department of Community Health and Medical Practice at the School of Medicine in Columbia, as an associate professor in the Family Practice Section.

Precommencement exercises for 84 candidates for M.D. degrees at the University of Missouri-Columbia, their families and friends were held on June 1 in Jesse Hall Auditorium.

Following opening remarks by Interim Chancellor Herbert W. Schooling and Dr. William D. Mayer, Dean and Director of the University Medical Center, Mr. Nathan Stark, Kansas City, chairman of the board of the Crown Redevelopment Corporation and Senior Vice-President of Hallmark, Inc., gave the precommencement address on "A Consumer Looks at Health Care Today and in the Future."

Among those receiving honors and their awards were Jonathan R. Bates, of St. Louis, winner of the Missouri State Medical Association Award for the outstanding graduating senior.

WASHINGTON UNIVERSITY

Samuel B. Guze, M.D., Washington University professor of psychiatry, associate psychiatrist at Barnes and Renard Hospitals and nationally known clinical researcher, has been named Vice-Chancellor for Medical Affairs at the University.

He succeeds William H. Danforth, M.D., who has been Vice-Chancellor for Medical Affairs since 1965. Dr. Danforth became Chancellor when Thomas H. Eliot retired on June 30.

In addition to his appointment in the Department of Psychiatry, Doctor Guze has served concurrently as director of Washington University's psychiatric clinic, associate professor of medicine, assistant to the dean of the School of Medicine, consultant in psychiatry to the ward services at Barnes Hospital and consulting psychiatrist at the Malcolm Bliss Mental Health Center.

Academic honors were presented on May 30 to 21 students and two faculty members of Washington University School of Medicine at the Senior Awards Program held in Stouffer's Riverfront Inn.

Philip Needleman, Ph.D., assistant professor of pharmacology, and Mark May, M.D., assistant professor of otolaryngology, received "Teacher of the Year" awards from the Class of 1971. In conjunction with the honor, both will be appointed Alumni Teaching Scholars for the next academic year and their departments each will receive \$25,000 from the alumni Medical Teaching Fund.

Recipient of the Missouri State Medical Association Award for scholastic excellence was Richard A. Brown of Chicago, Ill.

James M. Stokes, M.D. ('48), Clayton, associate professor of clinical surgery, has been elected president-elect of the Alumni Association of Washington University Medical Center. Jack



Dr. Guze

Barrow, M.D. ('46), Ladue, instructor in clinical medicine, will serve as president of the 3,800 member organization for the coming year.

Retiring president is James C. Sisk, M.D. ('46), Frontenac, assistant professor of clinical medicine.

ST. LOUIS UNIVERSITY

One hundred and twenty-one students of the St. Louis University School of Medicine recited the Hippocratic Oath on June 4 in Powell Symphony Hall during the Senior Class Day Assembly.

Keynote speaker was Sen. Thomas F. Eagleton, who spoke on legislation which he introduced for federal assistance for education in the health professions.

Dr. James M. Martin, associate professor of radiology, and Dr. Kermit Christensen, professor of anatomy, were named winners of the annual Golden Apple award for their excellence in teaching. Miss Ruth Holman, registrar for the School of Medicine, was the recipient of a plaque of appreciation from the student body.

John P. Beare, Celina, O., valedictorian of the class, was the winner of the 1971 Missouri State Medical Association award for academic excellence.

Dr. Maurice Green, professor of microbiology and director of the Institute of Molecular Virology, presented the R. E. Dyer Lecture on May 12 at the Jack Masur Auditorium, Clinical Center, Bethesda, Md. His speech was entitled "Mechanism of Cell Transformation by DNA and RNA Tumor Viruses." The award is made at appropriate times to a scientist who has made an outstanding contribution to knowledge in a field of medical science.

Dr. Henry E. Oppenheimer, associate clinical professor of internal medicine, attended the annual meeting of the American Diabetes Association in San Francisco on June 18-25. Doctor Oppenheimer attended the Editorial Board meeting of the lay magazine *Forecast*, was a member of the Committee on Advertising and a member of the Central Council representing the Missouri State Diabetes Association.

Dr. Raymond G. Slavin, associate professor of internal medicine and director of the Section of Allergy and Immunology, was recently honored by election to the American Association of Immunologists. He is the first member from the department of internal medicine to have been so recognized.

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PHILIP C. ANDERSON, M.D., *Columbia*

Treatment of Severe Loxoscelism

Special Article—Case Report

THE NORTH AMERICAN BROWN RECLUSE SPIDER, *Loxosceles reclusa*, resides in the southern two thirds of the Mississippi-Missouri-Ohio River basin and, with the increasing number of people in this region, has emerged as a major hazard among biting arachnids. The familiar spider (Fig. 1) is a common inhabitant of old housing, especially in humid sites, but does not bite unless provoked. The upper legs and buttocks of the victim are the most frequent locations of the bite in our experiences, although we have seen lesions of face, fingers, waist, axilla and neck. Many persons seem to be bitten on entering bed to sleep or while sleeping, and especially so if the bed has not been occupied for many days. The bite usually is not painful at first, may not even wake a sleeper and may easily be overlooked for several hours.

Persons disturbing quiet storage areas on outdoor porches or in basements or attics may be bitten when lifting a box to thigh level. Dumping trash is more risky, if the trash has been undisturbed out-of-doors for several days.

The severity of the tissue necrosis following bites is neither uniform nor predictable from the size of the spider. Dormant spiders in the early spring seem to wreak unusual injury, perhaps because venom has accumulated during their period of no feeding. Possibly *Loxosceles* will avoid living where other spiders live or where food for spiders (flies, insect eggs) is scarce. Therefore, tolerating harmless spiders in the home may be wise.



Fig. 1 *L. reclusa* is a brown-black, smooth appearing, 25¢ piece-size arachnid with a violin-mark on the dorsal aspect of the cephalothorax. Notice the darker markings on the abdomen.

I define severe Loxoscelism either as a very large envenomation or as a bite in a disadvantageous site, such as finger, toe, eyelid or lip. Two important general effects of venom are, first, extensive local necrosis compromising essential body structures and, second, direct damage to red blood cells, kidney and possibly the brain.

The North American brown recluse spider has emerged in Missouri as a major hazard among biting arachnids. Public education by physicians about the brown spider is urgently needed to aid in identifying the spider and to prevent severe disability in victims by encouraging prompt, accurate medical care. This timely paper provides vital information regarding early diagnosis and treatment. A case report describes management of the severe bite. Doctor Anderson is from the Division of Dermatology, University of Missouri Medical Center.

EARLY TREATMENT IN ROUTINE CASES

From our experience with treatment, considering only well verified instances of stings, we are satisfied that corticosteroids given within eight to 12 hours of the sting can almost completely abolish tissue necrosis, and, in favorable instances, steroids may be beneficial still up to 72 hours after the sting. The dose I suggest for the previously healthy young adult is 100 mg of prednisone or the equivalent daily for the first few days, tapering over 14 days to 30 mg. Depending on the response, the dose may be reduced slowly or more quickly and, finally, discontinued in two or three quicker steps. The drug may be taken orally. Contraindications to steroid treatment must be sought out, recorded and evaluated individually in each case. Injection of steroid into the site of the sting is rarely useful, in our opinion, and may worsen vasoconstriction or edema. In very severe or complicated cases, other medications, such as heparin or coumarin derivatives, may be useful as discussed in the case study. Debridement appears unnecessary in the early case and may enhance local clotting anomalies.

EARLY DIAGNOSIS

Public education about the brown spider does prevent severe disability by encouraging prompt medical care. Some public over-excitement leading to overuse of the emergency room may result, but this does not last and seems worth the benefit. Physicians are encouraged to plan Loxosceles-education programs in their areas and to offer accurate early diagnosis.

The earliest visible spider bite may be a painless, purpuric puncture or small red papule, but never a fresh vesicle or urticaria, normally. Over the next four to six hours, in the most

typical bites, a blue-gray colored vasoconstricted halo will spread around the puncture. This early diagnostic change in the blood vessels will extend and worsen steadily into necrosis. Inflammation and pain will increase quickly, if treatment is withheld. In late necrotic bites, a flaccid layer of skin may separate, resembling a large blister.

Seen after 24 to 48 hours, the skin at the sting site is red, hot and painful around a black core of necrosis. The mistaken diagnosis is usually "cellulitis" or "abscess" with the implication that streptococci are present. Under this interpretation, only after the inflammation is sterile and when steroid therapy is no longer useful, is the correct diagnosis made of brown spider bite. A proper history of the early changes in skin is more likely if the patient has been educated about the brown spider. However, even persons who recognize the spider, capture it and call the physician immediately should not be treated without diagnosis. These persons should be observed calmly until the earliest diagnostic blue-halo vasoconstrictive change around the puncture is positively identified before committing the patient to large-dose steroid treatment even for the short time necessary.

THE SEVERE BITE

Several instances have been reported of necrosis extending across and into the thigh, 30 cm to 40 cm by 15 cm to 20 cm and to 4 cm in depth, as the result of *Loxosceles* venom. The largest lesions have been on the thigh of obese persons, suggesting that venom is unusually destructive in adipose tissue. Destruction may extend through skin into muscle, damaging the urethra above or extending into supporting tissues around the knee below. The result is prolonged disability.

These large bites may cause hemoglobinemia, hemoglobulinuria, renal injury, fever, severe malaise, headache and fever. Usually, no extensive necrosis continues after the third day, especially when steroids are given. Therefore, if the necrotic area continues to enlarge peculiarly and is accompanied by hemolysis and other systemic symptoms, such as severe malaise or stupor, we suspect a consumptive coagulopathy may be aggravating the disease. Heparin has been used to treat several cases in this serious condition with excellent clinical response. Our own cases are too few to conclude finally that heparin is effective, nor is animal experimentation with *Loxosceles* venom decisive concerning the bene-

fit of heparin. This report concerns only our clinical impression about the benefit of this treatment for humans in a dire situation as compared only with our own experience with other severe spider bites.

CASE REPORT

A 23-year-old housewife was clearing storage boxes from the back porch on a warm January day and noted a fresh bruise on the lateral left thigh, without seeing a spider or being aware of any injury. Over the next 24 hours, this spot quickly became wider, sunken, dark blue and very tender in the center with a hot red halo. Disproportionate chills and malaise accompanied a mild temperature of 100 F. During the subsequent two days, the cutaneous bluish discoloration steadily extended from the knee to the groin, despite oral penicillin, one tablet four times daily, given for abscess. She developed back pain, muscle tenderness and vomited repeatedly. A larger dose of penicillin was injected prior to obtaining consultation about the diagnosis of "gangrenous cellulitis."

On review, the new diagnosis of *Loxoscelism* was made (Fig. 2), and then the patient recalled seeing many spiders and recognizing the brown recluse spider on the porch previously. Hospitalized on the fourth day after being bitten, the patient had worsening malaise, kidney pain, temperature to 101 F and deepening stupor. Free hemoglobin and red casts were present in the urine. Blood urea nitrogen was 22 mg/100 cc. Blood fibrogen and platelets were normal. Other studies included white blood cell count of 18,000/cu mm, showing 93% polymorpholeukocytes, with no eosinophils and no basophils.

Triamcinolone, 60 mg daily, was started, but 48 hours later (seventh day), because the necrotic process continued to expand, the serum hemoglobin had risen to 26.6 mg/100 cc. Also, because malaise and confusion were still worsening, heparin was started at usual loading doses and maintained at 20,000 U (200 mg) daily by subcutaneous injection. With this change in medication, the patient promptly became alert and comfortable. Inflammation at the margin of the necrotic area seemed to fade, and the necrosis did not extend further. The change was rapid and impressive to us. Other studies were important; serum hemoglobin increased to 48 mg/100 cc on the tenth day, but declined promptly to 32.6 mg/100 cc on the 13th day and was near-normal, 4.1 mg/100 cc, on the 16th day. Hemoglobin in the urine followed this same curve with the addition of a small number of red blood cells during heparin therapy. The white blood cell count rose to a high value of 36,000 cells/mm³ on the ninth day and only after that, as the leukocytosis disappeared, did a few eosinophils and basophils appear.

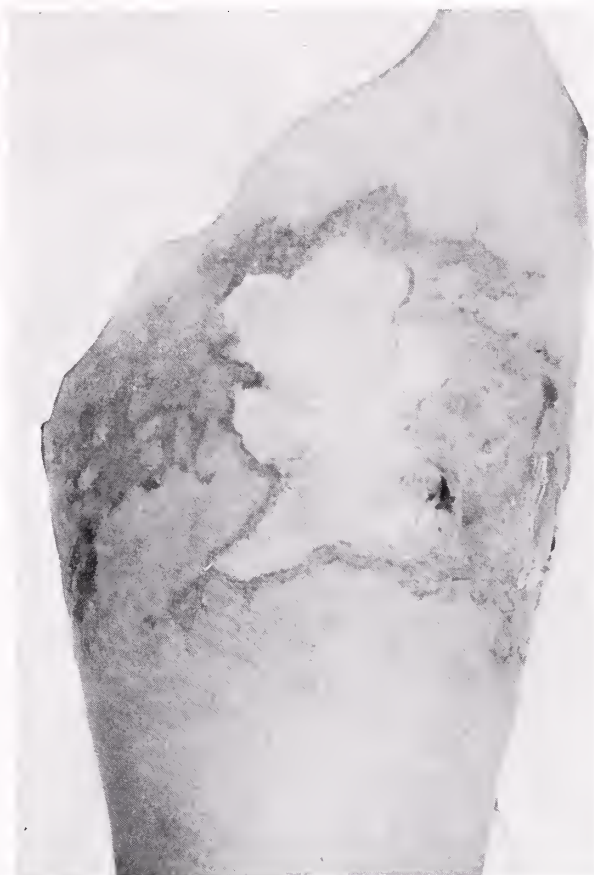


Fig. 2 At five days, necrosis is seen extending around a *Loxosceles* sting. Eventually, the area of lost tissue was twice the size of this visible lesion, which illustrates the importance of early treatment with steroids.

The tissue pathology of *Loxoscelism* resembles the laboratory Schwartzman reaction in skin and is thought to be due to local activation of clotting mechanisms within vessels forming microthromboses, which block the capillary causing gangrenous necrosis in the tissues. Coagulation mechanisms, normal and abnormal, were studied in our patient.

Activated partial thromboplastin values were normal for our patient on the fifth day, as was the fibrinogen and thrombin. From the fifth to the seventh day, despite evidence of increasing hemolysis and vascular necrosis in skin, platelets and fibrogen did not fall below minimum normal values. Neither did bilirubin values increase, nor cellular hemoglobin decline. However, a young and healthy patient is able to maintain near-normal values for all these substances during a short time while episodes of local coagulopathy are recognized by clinical observation and confirmed by histopathology in

(Continued on page 618)

Recent Developments in the Treatment of Infectious Diseases

Part III. Bacterial Meningitis

THERE ARE FEW INSTANCES in which the introduction of modern chemotherapy has produced such gratifying results as in the treatment of bacterial meningitis. Prior to its advent, pyogenic meningitis was almost uniformly fatal and the residual damage to the nervous system in the survivors was frequently severe. Nevertheless, despite the development of effective antibiotics and improvements in the management of shock, bacterial meningitis remains a life threatening problem which may tax the abilities of the most adept clinician.

CLINICAL MANIFESTATIONS

The symptoms of acute bacterial meningitis in adults are well known. Most patients have headache, lethargy or confusion, vomiting, irritability and fever; nuchal rigidity often is present. The onset may be insidious or rapidly progressive over a period of several hours. This latter group generally has a higher mortality.¹ Disease due to the meningococcus generally evolves rapidly, whereas that seen in childhood due to *H. influenzae* is somewhat slower. About half of the patients with meningococcal meningitis will have petechial or purpuric lesions of the skin. It is important, however, to realize that although these lesions are helpful in diagnosis, similar lesions may be seen in other situations in which there is a cerebrospinal fluid pleocytosis. Examples include aseptic meningitis due to ECHO virus type 9, acute bacterial endocarditis and occasionally meningitis due to other bacterial causes. About 20% of patients with bacterial meningitis will be markedly hyperactive, combative or delirious when first seen.

The neonate or infant, in contrast to the adult patient, may present a markedly different picture. The neonatal period is the age of greatest risk for bacterial meningitis and infection, rates of 1 per 1,000-2,000 live births have been reported. Higher rates occur among low-birth-weight infants.^{2, 3} The clinical symptoms and

signs characteristically associated with meningeal irritation may be absent in infants and in children with early disease. The infant may be fretful and anorectic; vomiting often appears early and the ensuing dehydration may prevent the appearance of a bulging fontanelle until late in the course of the disease. Fever is sometimes absent and the temperature may actually fall to subnormal values. Further progression of the disease leads to somolence, convulsions and coma. Opisthotonus appears late in the course of the illness.

Older infants and children have a more prominent clinical symptomatology. Fever, headache, vomiting and the customary signs of meningeal irritation are the presenting complaints. About two thirds of children with meningococcal disease will have an exanthem. Although skin lesions are petechial when fully developed, a macular rash may appear initially. Lesions resembling erythema nodosum also have been observed. Petechial skin lesions are less common in meningitis due to other organisms. Joint involvement may be seen in about 5% of patients with meningococcal disease. Some patients, especially those with fulminant disease, present with arthritis involving several joints due to direct seeding of the synovia. A hypersensitivity arthritis with onset late in the first week of the illness may present a diagnostic dilemma. Pain and sterile effusion are characteristic findings. This form of arthritis does not require special treatment and generally subsides within a week or two; sequelae are unknown. Arthritis following septicemia due to other organisms is quite different from that due to the meningococcus. It is a purulent arthritis with active multiplication of bacteria in the joint space, and prompt drainage (either open or closed) is necessary to prevent destruction of the joint and ankylosis.

About 10% of patients with acute bacterial meningitis will have definite or impending shock when first seen. This may be unrecognized

in young infants, but should be suspected in those with subnormal temperatures.

DIAGNOSIS

Meningitis frequently is curable if diagnosed early and managed correctly. The single most important factor in treatment of pneumococcal meningitis is the time elapsed between diagnosis and onset of therapy. In many instances, it is difficult to make a diagnosis whereas in others the diagnosis is clear and the problem centers on the identification of the specific organism involved. In its early stages, meningitis may be easily misdiagnosed as a viral-like illness when there is only modest fever, headache and minimal stiffness of the neck. Failure to diagnose the disease in this early phase will be minimized if it is remembered that many patients with these symptoms have meningitis and that it is often impossible to distinguish early meningitis from a viral illness without performing a lumbar puncture. It is incumbent upon the clinician to perform a lumbar puncture and exclude meningitis once the diagnosis has been considered. The decision regarding lumbar puncture may be based on the presence or absence of signs of meningeal irritation; a sensitive test is to ask the patient to place his head between his knees while sitting in bed. To reiterate, the prognosis in bacterial meningitis depends more on the interval between onset and treatment than on any other single factor. When a diagnosis is in doubt, it is not advisable to await clear cut signs of meningeal irritation before performing a lumbar puncture.

Mental symptoms may predominate in any type of meningitis, but these are more particularly noted in tuberculosis and syphilitic or other spirochetal meningitides. Confusion or delirium may be erroneously described to alcoholism, senility, drugs, diabetes or a stroke. Lumbar puncture is the only certain way to exclude meningitis. Other neurologic disorders frequently come under consideration and may prevent the proper diagnosis of meningitis. The onset of meningococcal meningitis may be so sudden and dramatic as to suggest a subarachnoid hemorrhage or a cerebrovascular accident. Head trauma with skull fracture may provide a means of ingress to bacteria from the nose, sinuses or ears. On these occasions, the signs of meningitis may be ascribed to blood in the subarachnoid space. Brain abscess with secondary meningitis may be misinterpreted as a

Special Series

The third article in this series on infectious diseases is concerned with the therapy of bacterial and tuberculous meningitis. In particular, it describes the methods of predicting the most probable pathogen, the management of meningococcal meningitis and the meningococcal carrier and the antibiotics of choice for specific agents and for meningitis of unknown etiology.

The next article in the series will be concerned with the use of antibiotics in the presence of renal failure, with emphasis on routes of excretion and calculation of dosage based on known alterations in the serum half-life of the drug.

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brain tumor with associated hemorrhage. Again, lumbar puncture is the only means of excluding the treatable possibility. Other infections, when present, may provide a ready explanation for the fever and headache and may delay the diagnosis of a coincident meningitis. This is especially true when frontal sinusitis or otitis exists with fever and headache. Pneumonia or septicemia with fever, headache and delirium also may mask meningitis. Patients such as these should be closely followed and a lumbar puncture performed at the earliest indication of meningeal irritation. Perhaps the most difficult diagnostic possibility to exclude is an encephalitis, especially since most forms of meningitis are associated with a superficial cerebritis. Similarly, diffuse encephalitis is almost always accompanied by some degree of meningeal irritation. In approaching this clinical problem, meningitis should be considered first since most forms of this disease are amenable to specific antibiotic therapy, whereas most forms of encephalitis have no specific therapy.

LABORATORY TESTS

Examination of the spinal fluid represents the only method for immediate confirmation of the diagnosis of meningitis. At the time spinal fluid is obtained, two blood cultures should be

collected as well. The character of the cerebrospinal fluid provides information of major importance in differential diagnosis. Neutrophilic pleocytosis, decreased sugar concentration and elevated protein concentration are the characteristic findings in bacterial meningitis. The lumbar puncture should be performed with a small gauge needle and fluid removed slowly. This is especially true if papilledema is present; however, the presence of papilledema on physical examination should certainly not preclude the performance of lumbar puncture. Under these conditions, minimal quantities of fluid should be removed. The bevel of the needle should be parallel to the trunk in order to minimize trauma to the dura; spinal fluid pressures should be recorded and flow carefully controlled during the collection.

Difficulty in obtaining fluid should alert the physician to the possibility of an epidural abscess or other obstruction. Immediate examination of the spinal fluid in clinical and bacteriologic laboratories should indicate whether infection exists and the nature of the causative organism. In bacterial meningitis, organisms are seen on the spun sediment of the spinal fluid about two thirds of the time. Because of the fastidiousness of meningococci, warm chocolate agar (37° C) should be inoculated and placed in a candle jar directly at the bedside. The temperature of the agar is important since these organisms will not grow at temperatures much below 34° C. The agar may be brought to proper temperature either by placing it under the arm for several minutes or by placing it under a bedside lamp. Blood, nasal swabs and aspirates of skin lesions should be handled similarly.

Cultures should be incubated both aerobically and anaerobically. If a differential count shows mononuclear cells, acid-fast stains and India ink preparations should be examined. If a malignancy is suspected a cover slip smear of the spun sediment should be prepared. A small amount of serum or albumin may be added to the cerebrospinal fluid sediment in order to enable the cells to stick to the cover glass. If no organisms can be demonstrated on the stained smear, repeat smears may be made aseptically from the cerebrospinal fluid after six to eight hours of incubation. The concentration of glucose in the cerebrospinal fluid should be determined immediately and the concentration of glucose in the blood measured at the same time. If viral meningitis is a possibility, specimens of cerebrospinal fluid and serum should be stored

at 4° C for comparison with a chronic phase serum to be obtained at a later time.

ETIOLOGY

The most common pathogens found in bacterial meningitis according to age group are depicted in Table 1. Meningitis in the newborn infant presents special problems in management since organisms recovered from this group of patients are quite different from those recovered from older children and adults. The most common organism found in infants over two months of age is *H. influenzae*, type B, a common inhabitant of the nasopharynx in children. Most disease appears to occur either spontaneously or following a mild respiratory infection, although

TABLE 1

Age	Probable Organisms
Less than 2 months	<i>E. coli</i> <i>Aerobacter</i> sp. other Enterobacteria
2 months to 5 years	<i>H. influenzae</i> <i>N. meningitidis</i> <i>D. pneumoniae</i>
Older than 5 years	<i>D. pneumoniae</i> <i>N. meningitidis</i>

episodes apparently secondary to acute otitis media, pneumonia or cellulitis are seen. During epidemic periods of meningococcal disease, meningococcal meningitis is the type most often seen; however, endemically it is second to *H. influenzae*. From the age of five until age of 15, the meningococcus predominates. In adults, the pneumococcus and meningococcus are almost equal in their frequency. Knowledge of the most probable type of pathogen to be found in each age group is of considerable importance when the cell count indicates that the infecting agent is bacterial, but no organisms can be recognized on smear of the spinal fluid sediment. At these times, therapy must be directed against the most probable pathogen.

ANTIBIOTIC THERAPY

Antibiotics should be given parenterally and in high dosage. The choice of antimicrobial agents is governed by the morphology of the organism or knowledge of the most probable agents when no organisms are seen. When this is the case, the antibiotic chosen should take into account the age of the patient and the possibility of an underlying disease or anatomic defect.

Sufficient evidence has now accumulated to indicate that combination therapy should not be used in the treatment of bacterial meningitis. In the past, combinations of penicillin and chloramphenicol, penicillin and sulfonamides or penicillin and tetracyclines were employed. It is now becoming clear that their implementation increases the mortality of the disease and the incidence of neurologic residua without providing a broader spectrum of antimicrobial coverage. They should not be used.

Therapy for specific infections:

1. *Pneumococcus*: Penicillin G should be given in a dosage of 20 to 30 million units daily and continued for ten to 14 days. The institution of therapy should be rapid in treating this disease, especially in older persons when pneumococcal meningitis is frequently associated with alcoholism or an extension of pneumonia or both. Case fatality rates in these persons is higher than with any other form of bacterial meningitis.

2. *Meningococcus*: Penicillin G, 20 to 30 million units per day as a constant intravenous infusion. Therapy should be continued for at least five days after the patient has become afebrile. During the past four years, there has been a nationwide increase in the type C meningococci and a decrease in type B isolates. About 90% of all type C meningococci are resistant to sulfadiazine at a concentration of 1 mg% or greater. Most of the isolates reported to the Public Health Service in the state of Missouri are type C and are resistant to sulfadiazine. Therefore, sulfonamides can no longer be considered to be the therapy of choice in the treatment of meningococcal meningitis and should not be used unless there is documented laboratory evidence that the organism isolated is sensitive to sulfadiazine. Corticosteroids are probably without effect on the course of fulminant meningococcemia. Patients with meningococcal meningitis are generally not infectious after the first 24 hours of therapy and isolation procedures may be discontinued at this time. Other cases or carriers should be sought among the patient's primary and secondary family members. In a study by Greenfield and Feldman,⁴ it was found that 44% of the family members of persons with meningococcal meningitis were carriers. The secondary contacts of this family showed a carrier incidence of 20%. Sampling of three unrelated populations yielded carrier rates no higher than 3%. This and other studies have shown conclusively that there is a significantly higher carrier rate for meningococci among persons either

primarily or secondarily in contact with the patient with meningitis.

This raises the question of prophylactic treatment of those individuals in contact with a patient who has meningococcal meningitis. Although sulfadiazine was an adequate agent for prophylaxis of meningococcal meningitis in the past, the emergence of sulfadiazine resistance in virtually all meningococcal isolates has precluded the use of this drug for prophylactic therapy. Attempts to replace sulfadiazine with penicillin, erythromycin and rifampin have all been met with only qualified success or failure.

Paradoxically, studies at Fort Ord, Calif.⁵ have indicated that the persons at risk of developing meningitis are not those who are nasopharyngeal carriers of the organism but those individuals who have been found not to be carriers. Therefore, at this time it would appear that prophylaxis against meningococcal infection using penicillin or erythromycin is not effective and, indeed, treats those individuals who need not be treated.

It would seem that in the management of family contacts of a patient with meningitis, the best approach would be one of careful observation of all primary contacts for signs of the development of the disease and the avoidance of the prophylactic use of penicillin.

3. *H. influenzae*: Ampicillin is now considered to be the drug of choice in meningitis caused by this organism. It is generally given to children in a dose of 300 mg/kg/day in six divided doses. The adult dose is 12 gm-16 gm per day. This would be the drug of choice in persons between the ages of two months to five years of life. In the past, the combination of penicillin and chloramphenicol has been recommended for patients in the age group mentioned above; such therapy is now outmoded. In a controlled study,⁶ single drug ampicillin therapy was shown to be more effective than a combination of ampicillin and chloramphenicol in the three common forms of bacterial meningitis. In fact, analysis of the data from that study showed that combining etiologic groups, antibiotic antagonism probably existed in the treatment group which received combination therapy of chloramphenicol plus ampicillin.⁷

There have been several recent isolated case reports of failure or relapse of *H. influenzae* meningitis despite ampicillin therapy. However, most of these cases could be shown to have had inadequate therapy with ampicillin. It should

be emphasized that as the disease process resolves, the dose of ampicillin should be continued at 300 mg/kg/day (in children) as the blood brain barrier reconstitutes itself. Duration of treatment is seven to 10 days irrespective of the rapidity of clinical improvement. *H. influenzae* is a rare cause of meningitis in persons over the age of six years and when it occurs, one should expect a parameningeal focus of infection.

These cases of meningitis are usually associated with head injury or immunoglobulin deficiency. This is especially true when this organism is isolated from an adult. The classic studies of Fothergill and Wright⁸ in 1933, in which they described a relationship between age, the occurrence of meningitis due to *H. influenzae* and the presence of bactericidal antibody for this organism, provided the genesis for our current ideas on pathogenesis. In their study of 130 persons, they demonstrated that infants had bactericidal activity in their serum for this organism for about two to three months after birth due to antibody obtained from the mother. From the age of two to three months until about three years of age, bactericidal activity for this organism was lacking. These observations correlated very well with the age distribution of *H. influenzae* meningitis which is highest in infants and children in the age group of two months to four years.

A recent report⁹ describing a case of *H. influenzae* meningitis in an adult has shown that the patient described had no bactericidal activity for *H. influenzae* in her serum; however, bactericidal activity appeared following the meningitis. These same authors examined the sera from 29 normal adults and found that bactericidal activity was absent in eight of these individuals (20%). These results are different from those performed in 1933 by Fothergill and Wright. A report by Collier, Connor and Nyhan¹⁰ of *H. influenzae* meningitis in infants less than four months of age (who would be expected to be protected by passively transferred antibody from the mother) showed that the sera from four of the mothers available for examination were deficient in bactericidal activity. The above studies indicate that perhaps the data from 1933 are no longer completely valid and that, in the future, *H. influenzae* meningitis may be found with increasing frequency in adults. Nevertheless, at this writing, *H. influenzae* meningitis, for all practical purposes, does not occur in individuals above the age of four years.

4. *Staphylococcus*: This is an extremely rare form of meningitis and there is no consensus regarding its initial therapy. It is frequently fatal regardless of the treatment employed and is usually secondary to a bacteremia from an abscess, a parameningeal focus with direct extension, subsequent to a neurosurgical procedure or other trauma to the skull or staphylococcal endocarditis. Initially, the meningitis should be treated as though the organism was resistant to penicillin. However, since it will not be known definitely that the infecting organism is resistant, therapy must begin with an agent that will be effective against both types of staphylococci, i.e., one of the isoxazolyl penicillins:¹¹ nafcillin, 20 gm per day, or oxacillin, 12 gm per day, should be administered intravenously as a constant infusion or in divided doses every four to six hours. The status of the cephalothins is in some dispute regarding their efficacy in the treatment of central nervous system infection; however, in persons allergic to penicillins, cephalothin may be used. It should be administered intravenously every four to six hours with a total dose of at least 200 mg/kg/day. An alternate agent would be vancomycin, but experience with this drug under these conditions is limited. If the staphylococcus is subsequently shown to be sensitive to penicillin, therapy should be immediately changed to penicillin-G, 20 to 30 million units per day given intravenously. It should be continued for at least ten days to two weeks.

5. *Gram-negative bacilli*: In most cases, the diagnosis is based on the finding of an extrameningeal focus of infection and Gram-negative bacilli in the cerebrospinal fluid. However, since the nature of the organism may only be inferred unless the extrameningeal infection is one which has been established for some time and the organism identified, it is necessary to provide wide spectrum coverage on an empirical basis. The least toxic combination of drugs which provides the widest antimicrobial spectrum is ampicillin and gentamicin. The latter drug is chosen in preference to the other aminoglycosides since it is less ototoxic and nephrotoxic and encompasses the therapeutic range of the polymyxins. Ampicillin should be administered as described above for *H. influenzae* meningitis. Gentamicin should be given 4 mg-5 mg/kg/day intramuscularly divided into q6h doses and 0.5 mg-1 mg/day intrathecally. Treatment may be altered if the response is poor or as indicated by sensitivity testing.

If the infecting species is a *Pseudomonas* not sensitive to gentamicin then polymyxin B or colistin may be given intramuscularly in the standard dosage along with intrathecal administration of polymyxin B. Polymyxin B sulfate may be given in a dose of 1.5 mg-2.5 mg/kg/day in patients with normal renal function. For intravenous administration, the calculated dose is dissolved in 200 ml-500 ml of 5% dextrose in water and infused over a 60-minute period. Two infusions 12 hours apart, each containing half the calculated dose, may be given instead. For intramuscular administration, the daily dosage should be administered in four equal doses. Colistin (polymyxin E) is usually administered in a dosage of 3 mg-5 mg/kg of body weight given in two to four divided doses. Frequently 150 mg are given intramuscularly every 12 hours. Intrathecal administration of polymyxin B may be carried out by dissolving 2 mg-3 mg of the drug in 10 ml of isotonic saline and injecting over a ten-minute period after the removal of 10 ml of cerebrospinal fluid.

6. *M. tuberculosis*: Meningitis due to this organism is treated with triple therapy. The usual doses are streptomycin, 1 gm a day five days a week for a minimum of three months; isonicotinic acid hydrazide (INH) is given in a dose of 600 mg divided in three equal doses; ethambutol, 20 mg/kg/day. Ethambutol is preferred to para-amino-salicylic acid (PAS) since its toxicity is less, the incidence of allergic manifestations much lower and its penetration of the meninges greater. The major toxic manifestation of ethambutol is optic neuritis, generally manifested as a decreasing ability to perceive the color green. Persons may be tested with a Snellen chart prior to administration of the drug and examined at three- or four-week intervals while taking the drug. The toxicity is reversible when the drug is withdrawn. Optimally, triple therapy should continue for at least three months (assuming normal renal function) and then ther-

apy with INH and ethambutol for a minimum of one year. INH may then be continued alone for a second year.

THERAPY IN PERSONS ALLERGIC TO PENICILLIN

The choice of an agent in treatment of meningitis in persons allergic to penicillin will depend to a certain extent on the manifestations of allergy to the drug. It is always dangerous to administer an allergen to a person known to be sensitive to the agent; however, in the case of fulminant meningitis due to the pneumococcus or meningococcus, the risks of not using penicillin frequently will outweigh the risks of the allergic manifestations of the drug. If the only known manifestations are mild, such as itching and rash, then penicillin may be administered in the doses described above and the allergic manifestations treated with antihistamines or hydrocortisone equivalent to 1 gm-2 gm/day. However, when the allergic manifestations are not known and there is a reasonable expectation that anaphylaxis might occur, the drug of choice would be chloramphenicol. Chloramphenicol penetrates the meninges better than any other antibiotic. It is generally administered in the dosage of 75 mg-100 mg/kg/day to a maximum of 4 gm. Erythromycin may be used as an alternate but it penetrates the blood-brain barrier only in concentrations of about 8% to 20% of those in the serum. It is inferior to chloramphenicol in this respect. Careful attention should be paid to peripheral blood count because of the well known association between chloramphenicol and hematopoietic depression.

THERAPY IN MENINGITIS OF UNKNOWN CAUSE

Therapy in meningitis of unknown cause will depend to a certain extent on the age of the patient (Table 2). In infants less than two months of age, therapy should include both ampicillin and an aminoglycoside, preferably kanamycin in the doses indicated, in order to pro-

TABLE 2

Age	Initial Therapy	Definitive Therapy
Less than 2 months	ampicillin 150-300 mg/kg/day and kanamycin 10-15 mg/kg/day	as determined by sensitivities
More than 2 months	ampicillin 150-300 mg/kg/day (children) ampicillin 150 mg/kg/day (adults)	meningococcus-penicillin G pneumococcus-penicillin G H. influenzae-ampicillin unknown-ampicillin*

* In older persons in whom a Gram-negative organism is suspected include gentamicin as described in the text.

vide adequate protection against *E. coli* and *H. influenzae*. For infants and children between the ages of two months and four years, optimal therapy would be ampicillin since the three most common causes of meningitis in this age group are all sensitive to the drug. In older patients, if there is evidence that an unusual organism may be present, such as an immunologic defect or leukemia, optimal therapy then would include the addition of an aminoglycoside. Gentamicin in the dosage described above would be the agent of choice.

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Severe Loxocelism

(Continued from page 611)

a small area of skin. When abnormal clotting occurs, fibrin bands may break off fragments of red blood cells. These distinctive fragments may be seen on a stained smear of the peripheral blood and may be considered presumptive evidence of a consumptive coagulopathy in a case such as ours. This may be an early sign occurring before any other chemical or clinical evidence. Heparin treatment should not be withheld awaiting gross depletion of fibrinogen or platelets in severe cases of Loxocelism, if our early clinical experience is reliable, and pending more exact diagnosis of early consumptive coagulopathy in humans.

SUMMARY

If treated very early in its course, the bite of the brown spider can be greatly ameliorated with large doses of corticosteroids. Enormous disability can be avoided by acting within 12 hours. A "blue macule" sign is necessary evi-

dence of a substantial envenomization and is clinical justification to undertake the risk of therapy, in our opinion. Errors in diagnosis consist usually of the over-diagnosis of cellulitis or abscess without alternative considerations. In cases of severe envenomation, if tissue necrosis is very extensive, in cases associated with systemic illness hemoglobinemia and sustained enlargement of the necrotic area, then a local coagulopathy may be suspected and heparin treatment appears to be useful. Tests of fibrinogen and platelets do not appear sufficiently sensitive to detect early localized intravascular coagulation in these cases, so clinical judgment is required. Public education appears to reduce the disabilities due to spider bites by encouraging prompt, accurate treatment.

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Annual Congress on Occupational Health

The 31st Annual Congress on Occupational Health will be held at Jackson Lake Lodge in Grand Teton National Park, Wyo. on Aug. 29-30, 1971. Sponsored by the AMA Council on Occupational Health, the two-day program will include the annual Physician's Award Ceremony and Luncheon. There is no registration fee. Reservations should be made directly with the Lodge. The Congress program is acceptable for 12½ elective hours by the AAGP.

Treatment of Esophagitis in Mirror Image Transposition

Case Report

CONGENITAL ANOMALIES usually are associated with clinical entities that require remedial therapy early in life to avoid serious complications later. Some congenital anatomic abnormalities, however, are of no physiologic or pathologic significance and remain interesting clinical curiosities. These entities are brought to our attention only during roentgenographic surveys or when they develop totally unrelated pathologic processes. Mirror image transposition of the thoraco-abdominal viscera is considered to be a rare anomaly occurring in one out of 11,000 persons.¹ Disease processes on such individuals may pose diagnostic difficulties, and surgical entities usually become challenging technical undertakings.

Mirror image transposition of the thoraco-abdominal viscera is frequently associated with other serious congenital defects. There have been frequent reports of cardiac anomalies and their surgical correction in the past.²⁻⁴ Abdominal pathologies have been encountered only rarely in combination with complete situs inversus. Early diagnosis and successful surgical intervention are possible with an awareness of such an uncommon entity. This is a report of an elderly man with massive bleeding from esophagitis and ulceration in a sliding hiatal hernia complicated by mirror image transposition of the thoraco-abdominal viscera.

CASE REPORT

A 71-year-old man was first admitted to the Veterans Administration Hospital in Kansas City, Mo. on March 6, 1970 for the treatment of prostatic hypertrophy. There was a history suggestive of esophagitis since 1956 and ineffective medical therapy. During an 18-month period prior to admission here, he was hospitalized for a total of 51 days at another hospital for retrosternal burning pain and episodes of pneumonia.

Physical examination showed a febrile patient with tachycardia and acute respiratory distress. Roentgenograms of the chest and abdomen revealed findings consistent with mirror image transposition

of the thoraco-abdominal viscera (Fig. 1). Electrocardiogram showed right axis deviation and atrial fibrillation. Blood studies revealed moderate degree of anemia. Bronchoscopy and sputum studies were carried out because of bilateral infiltrative processes in the lower lobes. He was dismissed from this hospital after the transurethral resection of the prostate gland.

Four weeks after the prostatic operation, the patient returned to the hospital with history of tarry stools off and on for several days and vomiting blood on the day of admission. Esophagoscopy evaluation showed complete absence of a sphincter mechanism at the cardioesophageal junction and advanced degree of esophagitis with ulcerated and

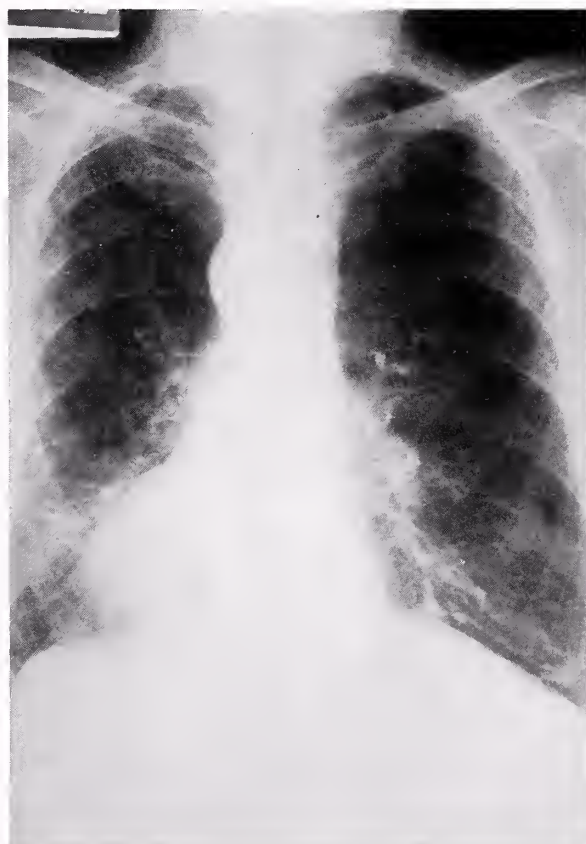


Fig. 1 Chest x-ray showing situs inversus and chronic infiltrative changes in both lower lobes.



Fig. 2 Upper gastrointestinal barium studies showing a large sliding type hiatal hernia.

friable mucosa. Gastroscopic evaluation was unremarkable. The gastric and esophageal mucosal junction in the esophagus was at 34 cm from the incisor teeth. Gross reflux of gastric contents into the proximal esophagus was obvious. The patient's hemoglobin level had dropped to 5 gm/100 cc and hematocrit to 18%. Upper gastrointestinal studies showed herniation of approximately half of the stomach into the right lower mediastinum (Fig. 2). Prior to surgical intervention, the patient required a total of 2,500 ml of whole blood transfusion.

After stabilizing the general condition with intense medical therapy, this patient was operated on through a midline upper abdominal incision. The entire abdominal viscera was displaced and rotated by 180°. The gastric herniation was reduced and the diaphragmatic cure was approximated. A Nissen type fundoplication was carried out. Postoperative gastrointestinal barium studies and esophagoscopy examination showed no reflux of gastric contents and marked clearing of the esophagitis (Fig. 3). The patient is able to sleep flat with one pillow and has had no recurrence of pulmonary complications. The surgical approach and repair was not different from routine reconstruction of the cardioesophageal competence.



Fig. 3 Postoperative barium studies of the stomach show complete reduction of the sliding hernia and air bubble in the fundus of the stomach in the area of the fundal plication.

DISCUSSION

In a recent review, Schuntzer and Linde have provided an excellent historical background on the early experiences with situs inversus totalis. Aristotle is thought to have been the first one to notice this abnormality in animals. Deselaers is credited with one of the earliest descriptions of situs inversus and its frequent association with other congenital defects.⁴ Although several theories have been advocated for the basis of mirror image transposition of internal structures, there has been no uniformity of opinion in the literature. In an uncomplicated case, the thoraco-abdominal viscera are simply displaced and rotated by 180°. Partial situs inversus involving only the thoracic viscera with or without abdominal heterotaxy has been encountered occasionally. A separate entity described as external dextrocardia or pseudodextrocardia is an acquired condition and is not uncommon. These usually are the results of extrinsic pressure on the heart by abnormalities of the chest wall, pleura, lung, mediastinum or diaphragm.⁵

In a recent review of 37 children with situs inversus, 29 had other associated congenital defects with a preponderance among the boys.³ Splenic agenesis and situs inversus with or without anomalies of the inferior vena cava have been reported in Ivemark syndrome.⁶ Situs inversus has been associated infrequently with bronchiectasis and pansinusitis also (Kartagners syndrome). Although roentgenographic studies may yield the diagnosis of situs inversus, the numerous associated anomalies may not be recognized, sometimes until an autopsy examination is performed.

Aberrant anatomic location of the structures in mirror image transposition has been a cause for delay or for failure to diagnose acute abdominal catastrophes. To the author's knowledge, there has been no previous report of successful repair of a large sliding hernia for severe esophagitis and bleeding in a patient with mirror image transposition. Esophagoscopy evaluation and repair of the hernia posed no unusual technical difficulties. The esophageal hiatus may be exposed through a midline or right subcostal incision. The triangular ligament of the small right lobe of the liver need not be divided; the liver is simply elevated with a retractor to obtain sufficient exposure. Although the patient was admitted with massive bleeding from esophagitis and required transfusions prior to surgical restoration of the cardiocophageal competence, we did not feel that ancillary procedures, such as vagotomy and pyloroplasty, were indicated.

The author's experience with more than 25 patients with esophagitis that was surgically treated by fundal plication has been most encouraging. Transposition of the thoraco-abdominal viscera should not be considered a contraindication to any surgical procedure when deemed essential. This patient's preoperative course is a clear example of the repeated pulmonary com-

Successful repair of sliding esophageal hernia may be carried out at no additional risk even on patients with mirror image transposition of the internal structures. The author describes indications and surgical technique for repair in an elderly patient with pulmonary and esophageal complications of gastroesophageal incompetence. Doctor Thomas is Assistant Chief, Surgical Service, Veterans Administration Hospital.

plications that are associated with gastroesophageal reflux. Even in the absence of an obvious sliding hiatal hernia, we should investigate patients with symptoms of esophagitis and frequent pulmonary complications with roentgenographic and esophagoscopy studies. The emphasis in repair of sliding hiatal hernia should be to restore a competent cardiocophageal junction and not in substituting it with ancillary procedures aimed at decreasing the peptic acidity.

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Missouri Anesthesiologists Elect Officers

Members of the Missouri Society of Anesthesiologists, Inc., elected new officers at the 1971 Annual Meeting on May 9. They are Drs. Elwyn S. Brown, Kansas City, president; Donald J. Dickler, St. Louis, President-Elect; M. T. Metzgar, Columbia, Vice-President; George A. Johnson, Springfield, Secretary-Treasurer; delegates, Harold J. Freiheit, St. Louis and C. Robert Schmidt, Kansas City; alternate delegates, Roger W. Bumgarner, Columbia and E. E. Bowe, Jefferson City.

Irrigation Versus Nonirrigation of Colostomy

THE IDEA of passing feces through an artificial opening in the abdominal wall, whether temporary or permanent, is repugnant to many patients. However, in obstructive lesions of the left side of the colon or cancer of the rectum, a colostomy of either type is an indisputable necessity. Once colostomy is established, the method of care varies. Most American surgeons recommend irrigation as the method of regulating bowel movements. In England, however, irrigation is the exception and natural evacuation or nonirrigation is the rule.

The advocates of both methods are enthusiastic about their recommendations. Bindkley¹ of New York, who had extensive experience in colostomy care, stated that "the majority of patients find irrigations the preferred method of control." Lyons,² also of New York, has reported, "An occasional patient can be found who has spontaneous evacuation once or twice daily without irrigation, but I do not believe it is wise to expect this set of circumstances except in relatively rare instances."

From England, we quote two prominent exponents of nonirrigation. Goligher³ has stated, "The aim of colostomy management is to regulate colon peristalsis so that colostomy action takes place only once or twice daily and at definite times when it is convenient. In the majority of cases, this state of affairs is easily achieved." Todd⁴ advocated "training and conditioning the bowel to act by natural evacuation once or twice a day."

The dreaded complication of irrigation is perforation of the bowel by the irrigating tip, which leads to localized abscess or generalized peritonitis. The complication may not be as infrequent as is believed, since many cases have existed without being documented. Numerous articles reporting such catastrophes have been published in American medical literature. Meeker *et al*⁵ reported four cases with three deaths. Green *et al*⁶ recorded four cases with one

death. Spiro *et al*⁷ mentioned eight irrigation perforations in 25 years' experience at the Memorial Hospital of New York. Grillo⁸ cited 14 cases with five deaths.

DISCUSSION

To irrigate or not to irrigate is the question. The advocates of both methods are vociferous in their praise of their preferences and loud in their condemnation of the others. We believe that the individual patient should be selected to use the method which will suit him and will work the best for him.

Most surgical residency training programs provide instruction in the technical aspects of the abdomino-perineal resection. All too frequently, the surgical resident has minimal experience in the long term management of the patient. This holds true with the general practitioner who refers his patient to the surgeon and sees the patient after the surgical procedure is completed. We believe it is essential for the surgical trainee, the general practitioner and the general surgeon to be well versed in the alternative methods of management so that each can assume an active role in the postoperative care and education of the colostomy patient.

Several methods of irrigation were recommended by different surgeons. The most commonly used is the Bindkley¹ closed system of irrigation which became the prototype of irrigation procedure in this country. An enema bag (can) to which a soft rubber catheter has been attached is filled with tepid water. A transparent dome or a long funnel sheath is applied over the stoma by means of a belt placed around the abdomen of a patient. The catheter is introduced through the dome into the stoma, the water enters the colon and the return drains through the sheath into the toilet. This procedure is usually repeated every other day or every three days. In the interval between irrigations, the patient is advised to wear only a small

dressing since, theoretically, there should be no function through the colonic stoma between irrigations. Seargeant⁹ studied 27 cases and found daily irrigation in 17 cases, alternate days in three cases, every third day in four cases and once a week in three cases.

Sutherland *et al*¹⁰ in 1952 interviewed 57 patients who used the Bindkley type of irrigation: half of the patients used ten gallons or more of water. The range was from two quarts to ten gallons. The time consumed in irrigation was for 23 patients less than 1½ hours; for 18, 1½ to 2½ hours; and for 16, more than 3½ hours. The time range was from 45 minutes to eight hours. The frequent complaints are inadequate return and the need for more water, which lead to accidents and spillage. Another complaint is that the fluid was not adequately evacuated after irrigation.

Mecray and Bowman¹¹ devised a method of irrigation using an 8 oz bulb syringe with hard nozzle in an "open kidney basin method." The time consumed is less than an hour. The patient felt secure sooner than when using the Bindkley method. Later, the University Hospital of New York University Medical Center modified this method by using "closed sheath-type irrigation," in which return evacuates directly into the toilet, except for bedridden patients. The hard nozzle was replaced with a soft flexible plastic or rubber tip catheter to avoid perforation.

THE IRRIGATION PROGRAM

If the irrigation program is selected, it is started by the nurse on the fourth or fifth postoperative day while the patient is sitting on a commode or toilet, when possible. After initial irrigation, the patient is encouraged to do the procedure himself until self-sufficiency is established. Irrigation at the same time each day, either after breakfast or dinner, is recommended since ingestion of food is a stimulus to defecation. Ordinary tap water at tepid temperature usually is used, but some patients get better results with cool water.

TECHNIQUE OF THE BULB SYRINGE IRRIGATION

1. The bulb syringe is an 8-oz rectal device made of soft rubber. The hard nozzle is cut off and a 4-inch flexible No. 24 French rubber or plastic catheter is placed over the stub of the bulb nozzle. The opening of the catheter must be at the end (not at the side) so that the irrigating stream will be directed into the lumen of the colon rather than against the wall.

The goal of this article is to acquaint the surgical resident, general practitioner and general surgeon with details of the two principal methods of colostomy management and to provide an aid in identifying perforation promptly and initiating appropriate therapy. Doctor Jack is a Staff Physician and Doctor Shieber is Consultant in General Surgery at Jefferson Barracks Veterans Administration Hospital. Dr. Wee, who was Chief of Surgical Service at the Hospital at the time this paper was written, is now in private practice.

2. An elastic belt is placed around the patient's waist. A chain holds the belt in position and clamps are used to maintain the irrigating sheath and the temporary bag.

3. An 18-inch disposable plastic sheath is placed on a plastic ring, which is placed over the stoma and secured with the clips of the belt.

4. A small slit is cut in the sheath near the ring. The hole is placed above and to one side of the stoma to prevent leakage of return flow.

5. The patient sits on the toilet and the sheath leads directly into the bowl. Air is expelled from the bulb. The bulb syringe is filled with tepid water, either from the pitcher or directly from the bowl of the sink. It is important that all air be expelled from the bulb. Therefore, after the first filling, the nozzle is held upright, the air is expelled by compression of the bulb and the nozzle is again placed under the water for complete filling.

6. The tip of the syringe is inserted through the slit in the sheath for a distance of 3 inches to 5 inches into the colon. Using the fingers of both hands, the patient applies continuous and steady pressure to the bulb to expel water into the colon. Pressure should be maintained on the bulb as it is withdrawn from the stoma to prevent the aspiration of feces into the nozzle.

7. The last two steps (#5 and #6) are repeated once or twice. No more than three bulbfuls of water should be used. If more fluid is used, the procedure will be prolonged because of retention of water within the colon which may lead to accidents later in the day. Some patients find it helpful to massage the lower part of the abdomen while waiting for the return.

Upon completion of the irrigation return, the drainage sheath is removed and discarded. The stoma is wiped clean, and a temporary disposable bag is attached to the belt. The bag is left in place for about 15 minutes, during which

time the patient may bathe, shave or do other tasks. For the occasional patient, the use of the temporary bag may be unnecessary. After discarding the bag, a small dressing of one or two 4 inch x 4 inch pieces of gauze is applied to the stoma and held in place by either a girdle or a built-in wide elasticized waist band or underwear shorts.

The bulb syringe and the pitcher are simply washed with soapy water and rinsed. Being disposable, the other items are either thrown into the toilet or discarded into the paper bag.

The advantages of the bulb syringe method over the conventional bag technique of irrigation are as follows:

1. The apparatus is simple and compact and requires a minimum of cleaning.

2. The short nozzle of the bulb and the small amount of water used avoid introduction of a large quantity of fluid into the proximal portion of the colon. Trapping of water in the colon in the conventional irrigation method may be responsible for the prolonged irrigation time and also may result in spillage or accidents later in the day, not to mention the danger of water intoxication. Bulb syringe irrigation is used to stimulate the fecal return rather than to wash it out.

One of the dreaded complications of the irrigating method is perforation. The clinical manifestation of the onset of abdominal pain associated with or immediately following an unrewarding irrigation is generally the first indication that something is amiss. Experience is not a factor since occurrence of a perforation varies from shortly after operation to as long as 22 years after. The distance of perforation is a short distance below the peritoneum from 2½ inches to 4 or 6 inches from the abdominal wall and even into the lateral gutter.

Spiro *et al*⁷ stated that the causes of perforation are sizeable paracolostomy hernia which are present in six of eight patients, due to which dilatation, angulation and attenuation of the terminal colon may occur, resulting in difficulty in obtaining adequate return. This may require more frequent or repeated irrigations to evacuate the large bowel adequately. It occurs primarily in elderly patients from 60 to 88 years of age at time of perforation. Green⁶ thought the contributing factor was the use of a stiff catheter, forceful introduction of the catheter tip to more than three inches in the hands of an impatient and excited person, increased hydrostatic pressure, weakening of the wall of the bowel caused by the erosive effect of enema tip or catheter and possible rupture of a diverticu-

lum. Fixation and kinking of the colon, caused by obliteration of the lateral peritoneal gutter, have been mentioned as important factors predisposing to perforation.

Meeker *et al*⁵ said that many elderly persons were not capable of caring for themselves. As a consequence of their incapacity, perforations were more prone to occur. Furthermore, these aged patients often live alone and prompt recognition of the perforation is unusual, thus leading to high morbidity and mortality. The authors classified colon perforation through colostomy stomas in two groups:

1. Intraperitoneal perforation usually occurs shortly after administration of an enema and is followed immediately by severe abdominal pain. This dramatic episode does not always occur. Sometimes, repeated enemas were given over a period of several days before clear-cut symptoms of an acute abdomen appeared. The management consisted of drainage of the involved area and establishment of a proximal diverting colostomy or removal of the perforated colonic stoma and construction of a new colostomy.

2. Extraperitoneal perforation penetrates the wall of the colon without involving the peritoneal cavity. This is treated by compresses with systemic antibiotic administration and incision of drainage later and maybe a diverting colostomy. Occasionally, if perforation is suspected and colostomy is done, the perforated area then can be repaired before edema sets in.

The mortality of the intraperitoneal perforation varies and depends upon the time elapsed between the accident and surgical intervention and the general condition of the patient.

NONIRRIGATION METHOD

In an excellent article, Grier *et al*¹² outlined the evaluation of colonic stoma management without irrigation and stated that natural evacuation and diet is stressed as the controlling factor. When dietary restriction proves ineffective, drugs are recommended. The brochure distributed to colostomy patients at the Queen Elizabeth Hospital in Birmingham, England states: "The secret of success in the management of a colostomy is to keep the motion semi-solid and to train the bowels to open at regular and expected times, preferably early in the morning. Both aims can be attained by the same two means: (1) Diet and (2) Medicaments."

In the brochure, "The Home Management of a Colostomy," which is distributed by the same hospital, is written, "Following operation, a constipating diet is prescribed, consisting of such

foods as poultry, meat, fish, eggs, bread and butter, potatoes and milk, puddings. Fruits and vegetables, especially if uncooked, should be avoided at first. If, in spite of dietary restriction, the bowel function is loose, kaolin or methyl cellulose-type drugs may be helpful." In the St. Marks Hospital's London booklet, it was stated that a teaspoonful of one of these preparations (Isogel, kaolin or normocol) may be helpful.

In the "Letter of Advice on the Care of Your Colostomy," which is given to patients at the General Infirmary at Leeds, Goligher³ writes: "You will have to discover the habits of your own colostomy." With the majority of people, however, the colostomy actions take place immediately after rising in the morning, especially if an early cup of tea is taken. To prevent accidents or spillage, dressings or disposable bags are worn and are held in place by belts or girdle-type appliances. Some patients take a laxative, usually as a weekly "health measure" or for transient constipation. Some take it as an aid to colonic stoma regulation. Perhaps other patients discover that more frequent use of laxatives regulates them better.

CONCLUSION

This paper was written to acquaint the surgical residents, general practitioners and general surgeons with the two principal ways of colostomy management, the nonirrigating and irrigating methods. Several methods for taking care of the colostomy by irrigation are reviewed. The importance of using a soft rubber catheter

tip and the gentleness of inserting the catheter tip is emphasized. This report also is made with the hope that it may aid others in identifying perforation promptly and initiating appropriate therapy. We believe that elimination of colostomy irrigation, especially in the impatient, highly excitable patients under extreme environmental stress and in infirm elderly patients, may provide effective prophylaxis against perforation with its high morbidity and mortality without affecting colostomy function adversely.

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Robert W. Maher to Head Missouri Surgeons

Robert W. Maher, M.D., Springfield, was elected president of the Missouri Chapter of the American College of Surgeons at the Annual Meeting on May 7-9, 1971. Other officers elected are Drs. John S. Spratt, Jr., Columbia, vice-president and Hugh E. Stephenson, Jr., Columbia, secretary-treasurer. Elected to the Council for a one-year term was the immediate past-president, Dr. Frederick J. McCoy, Kansas City. Drs. Paul G. Koontz of Kansas City and Marshall B. Conrad and Leo V. Mulligan of St. Louis were elected to the Council for three-year terms.

WILLIAM B. HARDIN, JR., M.D., ABELARDO B. SANCHEZ, M.D.
and MICHAEL H. LUZECKY, M.D., St. Louis

Stroke Survey at a Large Midwestern Teaching Hospital

BARNES HOSPITAL is a 1,138-bed, nonprofit, short-term, general hospital affiliated with Washington University School of Medicine. It serves the metropolitan St. Louis area, as well as outlying counties of Eastern Missouri and Southern Illinois, receiving 27,000 patients per year in the emergency room, 99,000 in the outpatient clinic and 5,000 through the private doctors' offices. It admits from 30,000 to 35,000 patients yearly and has a physician staff of more than 600 specialists, 290 residents and 50 interns, each of whom serves to some extent in a teaching capacity for the medical school. It seemed to us that the incidence and results of management of cerebrovascular disease at an institution such as Barnes Hospital would be of more than passing interest to the physicians of Missouri and Illinois. For this reason, a retrospective study of all clinically distinguishable cerebrovascular disease syndromes admitted to Barnes Hospital during a one-year period was undertaken. We wished to determine by means of a careful review of the hospital records the bases upon which diagnosis of "strokes" were made, as well as the exact incidence and fate of cerebrovascular disease patients within this medical center.

SELECTION CRITERIA

All records were selected and reviewed by us. At least 30% of the records selected for inclusion in the study were reviewed independently by more than one of us. Charts were initially identified through the Barnes Hospital insurance offices according to their discharge diagnoses. All charts with any diagnosis or code suggesting a cerebrovascular syndrome, disease or "stroke" on patients admitted between June 1, 1968 and May 31, 1969, inclusive, were reviewed. We define the term "stroke" as an abruptly developing neurological abnormality which is secondary to an occlusive or hemorrhagic vascular accident involving one or more of the vessels (arteries or venous structures) of the brain.

Charts eventually selected for study carried

as their primary diagnosis some type of clinically distinguishable cerebrovascular disease syndrome and had sufficient information to justify the diagnosis beyond reasonable doubt. Thus, charts with inadequate histories or physical examinations, together with no laboratory proof of the diagnosis, were rejected from the study. Twenty-seven charts were rejected for this reason. Our list of primary diagnosis compatible with the syndrome of "stroke" is as follows:

Infarction, cerebral hemisphere, cause unknown

Infarction, cerebral hemisphere, due to thrombosis

Infarction, cerebral hemisphere, due to embolism

Intracerebral hemorrhage

Subarachnoid hemorrhage, cause undetermined

Subarachnoid hemorrhage, due to aneurysm

Subarachnoid hemorrhage, other cause demonstrated

Infarction or intra-axial hemorrhage of brain-stem or cerebellum

Venous sinus thrombosis

Acute ill-defined cerebrovascular disease
(ICDA Category 436)

In addition to these, we included five other cerebrovascular disease categories which relate to "stroke." These were as follows:

Subdural hematoma

Epidural hematoma

Cranial nerve involvement due to aneurysm

Headache or epilepsy secondary to A-V malformation or aneurysm

Asymptomatic (bruit) aneurysm or A-V malformation

We included patients with *hemiplegic migraine* under the category of *acute ill-defined cerebrovascular disease* if they presented with objective signs. Excluded were cases of (1) dizziness or light-headedness diagnosed, without

other evidence, as vertebral-basilar insufficiency, (2) acute oculomotor palsy in diabetics, (3) acute vertigo with or without abnormal caloric tests, (4) chronic brain syndromes or psychosis suspected of being due to long standing cerebrovascular ischemia, (5) syncope in which impairment of cerebral blood flow due to neck vessel disease was not adequately demonstrated and (6) "old strokes" who were admitted for physical therapy or management of other medical problems.

Recognizing the limitation of stroke diagnosis, we attempted to classify the admissions according to the temporal profile of their clinical course into *completed stroke* (CS), *progressing stroke* (PS), *reversible ischemic neurological deficit* (RIND), *transient ischemic attack* (TIA), *asymptomatic neck* (ASN) or *cerebral vessel* (ASC) disease and "little strokes" associated with chronic cerebrovascular disease (LS). Insofar as was practical, we specified 12 hours as the maximum time for reversibility of the neurological deficit in TIA and no neurological deficit or symptom at discharge as the requirement for RIND. We reluctantly acknowledged the unpopular "little stroke" category in a few patients with acute ill-defined cerebrovascular disease if their histories at the time of admission clearly indicated a step-wise dissolution of neurological function, including aphasia or dysarthria and their neurological examination demonstrated at least one substantial objective sign.

INCIDENCE

Within the specified survey period, approximately 130,500 patients were screened by the clinics and emergency room. From this group, 32,077 patients were admitted as inpatients. Cerebrovascular disease (CVD) accounted for 490 (1.5%) of these admissions (485 separate patients). During this same period, a total of 848 persons died in the hospital. Seventy-nine (9.3%) were CVD admissions. Postmortem examinations, which included the brain, were obtained in 46 of the 79 CVD deaths, an incidence of 58.2%. This was higher than the postmortem examination rate (55.3%) for the hospital as a whole.

Of the majority of admissions, 401 (82%) were white, 223 (45.5%) were white men, 178 (36.4%) white women, 43 (8.7%) Negro men, and 46 (9.4%) Negro women. Comparative statistics on the Negro and white admissions to Barnes as a whole are not available. The full and part-time staff of the Neurology Department cared for 231 (47%) admissions, private internists were re-

The records of 490 patients admitted to Barnes Hospital for cerebrovascular diseases were carefully surveyed during a one-year period. Strokes were grouped into generally acceptable clinical and pathological syndromes according to the chart primary diagnosis. They were further grouped according to their clinical temporal profiles. The authors report their findings and discuss their significance. Drs. Hardin, Sanchez and Luzecky are from the Department of Neurology, Washington University School of Medicine.

sponsible for 149 (31%), and the Surgery Department (primarily Neurosurgery) for 110 (22%). A total of 64 admissions had operations specific for the CVD condition and an additional two had gastrostomies; 22 (33%) of these patients died prior to discharge. By contrast, the death rate for the remaining 426 nonsurgical admissions was 13%. The overall death rate for the entire 490 CVD admissions was 16%. The relationship of the number of deaths to patient age and stroke category is given in Fig. 1.

DIAGNOSES

Cerebral infarction due to thrombosis or to undetermined cause was diagnosed in 205 admissions, 41.8% of the total. On the basis of the histories and examinations recorded on the charts, we classified 181 as completed strokes (CS), 18 as reversible ischemic neurological deficit (RIND), four as progressing stroke (PS) and two as "little strokes" associated with chronic cerebral ischemia (LS).

There were 21 deaths in 205 admissions, an incidence of 10.2%. Strokes of this type, however, accounted for 26.5% of all CVD deaths. Negroes accounted for 35 (17%) of the admissions in this category and four (19%) deaths. Arteriosclerosis was listed as a contributory cause or secondary diagnosis in 129 (63%), hypertension in 97 (47%), diabetes in 62 (30%), myocardial infarction in 11 (5%), other cardiopathy in 67 (33%), surgical complication in five (2%), oral contraceptive use in six (2.9%) and malignancy in three (1.5%). Out of a total of 64 angiograms performed, 39 (61%) confirmed or else strongly supported the diagnosis. In nine of the 21 deaths, the diagnosis was substantiated at postmortem; eight of these had not been supported

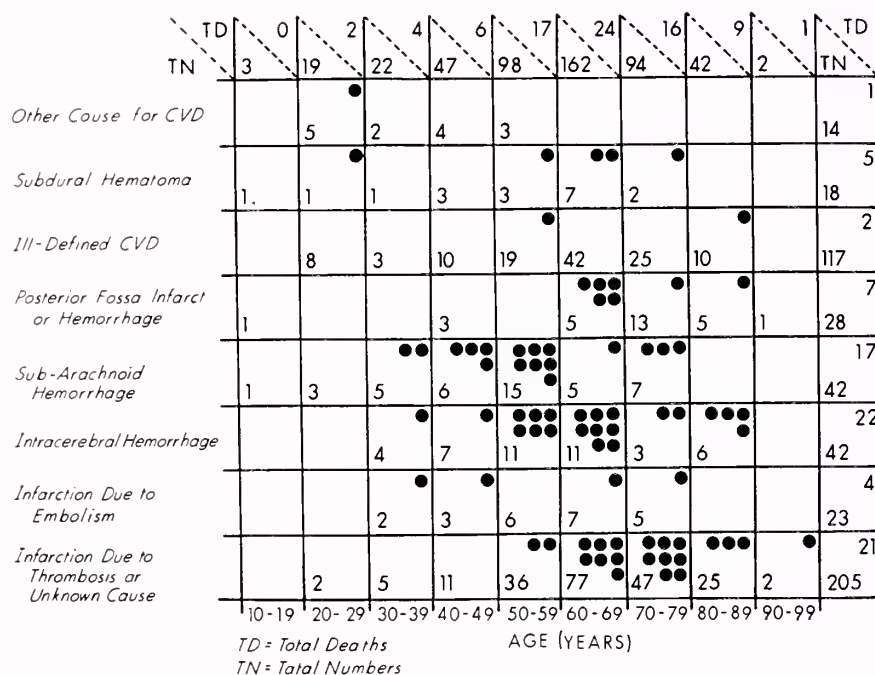


Fig. 1 Four hundred and eighty-nine admissions to Barnes Hospital for cerebrovascular diseases (CVD) during one year. Lower left corner figures show numbers of admissions; upper right corner figures or dots indicate numbers of deaths. One case of venous sinus thrombosis is not included.

by angiography prior to death. Thus, the number of well supported diagnoses in this category was 46 (22%).

The majority (38%) of admissions in this stroke category were 60 to 69 years old with only 18 (9%) being less than 50 years old. Male admissions represented 56% of the total. Twenty percent more admissions occurred during the summer (June, July and August) than during any other three-month period, and the average length of hospitalization for patients remaining beyond the second day was 20 days.

Cerebral embolism was diagnosed in 23 admissions or 4.7% of the total. We classified 20 as CS, two as RIND and one as PS. There were four deaths in the 23 admissions, an incidence of 17.4%. Embolism accounted for only 5% of the total number of CVD deaths. Negroes accounted for six (26%) admissions and two (50%) deaths. Arteriosclerosis was listed as a contributory cause or secondary diagnosis in 15 (65%), hypertension in nine (39%), myocardial infarction in two (8%), other cardiopathy in 18 (78%), diabetes in seven (30%), surgical complication in one (4%) and no contributory cause or associated illness in two (8%). Out of 13 angiograms performed, ten (77%) confirmed or strongly supported the diagnosis. In two of four deaths, the diagnosis was substantiated at postmortem. The total number of diagnoses supported in this category was 12 (52%).

Only five (22%) of the admissions were below age 50, and there was no peak incidence above this age. Men were in a slight majority of 12 (52%). There was no peak season or month for admissions, and the average period of hospitalization for patients remaining beyond the second day was 20 days.

Intracerebral hemorrhage was diagnosed in 42 admissions or 8.6% of the total. We classified all 42 as completed strokes. There were 22 deaths in 42 admissions, an incidence of 52%. Strokes with this diagnosis, however, accounted for 28% of all CVD deaths. Negroes accounted for 11 (26%) of intracerebral hemorrhage admissions and five (23%) of the deaths. Hypertension was listed as a contributory cause or secondary diagnosis in 28 (67%), arteriosclerosis in 15 (36%), heart disease in seven (17%), malignancy in three (7%), diabetes in two (5%) and surgical complication in one (2%). No contributory cause or secondary diagnosis was given for four (10%). Angiography was done on 26. Fifteen (58%) strongly supported the diagnosis, and eight (19%) additional cases were confirmed at autopsy. Ten cases (altogether) were confirmed at surgery. Thirty-two (76%) diagnoses in this category were either substantiated by arteriography or confirmed at surgery or postmortem.

The majority of admissions were men (24 or 57%). The peak age group was 50 to 59 years (26%) with 12 (29%) occurring in persons below

50 years. More than twice as many admissions, eight or 19%, occurred in April and August than during any other month of the year. The average period of hospitalization for patients remaining beyond the second day was 35 days.

Subarachnoid hemorrhage due to aneurysm, A-V malformation, or undemonstrated cause was diagnosed in 42 admissions accounting for 8.6% of the total. Two cases of subarachnoid hemorrhage secondary to spinal cord A-V malformation were categorically excluded from the study. We classified 40 as CS, one as RIND and one as PS. There were 17 deaths in 42 admissions, an incidence of 40%. Strokes of this type accounted for 21.5% of all CVD deaths. Negroes accounted for nine (21%) admissions and two (12%) deaths. Hypertension was listed as a contributory cause or secondary diagnosis in 19 (45%), arteriosclerosis in ten (24%), heart disease in five (12%), diabetes in three (7%) and oral contraceptive use in one (2%). No specific or direct cause was found for subarachnoid hemorrhage in eight (19%). Aneurysms were demonstrated by angiography in 28 (67%), whereas other causes were demonstrated in the remaining six (14%). Surgery was performed on 22 (52%) of whom ten (45%) died in the hospital.

The majority of admissions were women (25 or 60%). The peak age for admissions was 50 to 59 years (15 or 36%) with 15 additional admissions below age 50. Eighteen (43%) patients were admitted during the fall months (September, October, November), the remainder being evenly distributed throughout the year. The average period of hospitalization for patients remaining beyond the second day was 37 days (27 days without surgery; 40 days with surgery). The average length of hospitalization with surgery was probably shortened somewhat by patients who died a short time thereafter.

Hemorrhage or infarction of posterior fossa structures (brain stem or cerebellum) was diagnosed in 28 instances or 5.7% of the total admissions. We classified 25 as CS, two as RIND and one as TIA. There were seven deaths in 28 admissions, an incidence of 25%. Strokes in this group, however, accounted for only 9% of all CVD deaths. Negroes accounted for seven (25%) of the admissions and three (43%) of the deaths. Hypertension was listed as a contributory cause or secondary diagnosis in 15 (54%), arteriosclerosis in 14 (50%), diabetes in six (21%), heart disease in five (18%) and malignancy and surgical complication, one each (3.5%). No contributory cause or secondary diagnosis was given

for four (14%). Out of a total of ten angiograms performed, only three (30%) strongly supported the diagnosis. Six diagnoses (21%) were confirmed at postmortem. The number of diagnoses supported either by postmortem or arteriography was seven (25%).

Only four (14%) admissions were below age 50 with the peak age incidence occurring at 60 to 69 years with 13 (46%) admissions. Sixteen (57%) men were in slight majority. Three times as many admissions (eight or 29%) occurred in June as in any other month, and the average duration of hospitalization for patients remaining beyond the second day was 17 days.

Venous sinus thrombosis was diagnosed once or 0.2% of the total. It occurred in a 49-year-old white woman and was supported by angiographic findings. She was classified as having a completed stroke and was in the hospital 30 days. Hypertension was listed as the only suspected contributory cause.

Acute ill-defined cerebrovascular disease (ICDA category 436) was diagnosed in 117 admissions or 23.8% of the total. We classified 70 as TIA, 22 as RIND, 11 as CS, seven as ASN and four as LS. There were only two deaths in 117 admissions, an incidence of 1.7%. This category accounted for only 2.5% of all CVD deaths. Negroes accounted for only seven (6%) admissions and no deaths. Arteriosclerosis was listed as a contributory cause or secondary diagnosis in 67 (57%), hypertension in 36 (31%), cardiopathy other than infarction in 28 (24%), diabetes in 23 (20%), malignancy in three (2.5%) and oral contraceptive use in two (1.7%). Angiography was performed in 43 admissions and strongly supported or confirmed the diagnosis in 25 (58%). Postmortem contradicted the clinical diagnosis in one case, a misdiagnosed cerebellar hemorrhage. In the other case, the patient died following an elective endarterectomy for stenosis of an internal carotid artery.

Twenty (17%) admissions were below age 50 while the peak age incidence occurred at 60 to 69 years or 43 (37%) admissions. Men (63 or 54%) were in a slight majority. There was no peak season or month for admissions and the average period of hospitalization for 70 TIA's and 22 RIND's was 11 days for each.

Acute and chronic subdural hematoma was diagnosed in 18 admissions or 3.6% of the total. We classified five of these as CS while the remainder were not readily classifiable within this terminology. There were five deaths in 18 admissions, an incidence of 28%. The CVD in this

group, however, accounted for only 6% of the total number of deaths. Negroes accounted for ten (56%) admissions and all five deaths. Trauma was listed as a contributory cause in eight (44%), hypertension was a contributory cause or secondary diagnosis in five (28%), arteriosclerosis in four (22%), diabetes in three (17%) and malignancy in two (11%). In four (22%), no contributory cause or secondary diagnosis was given. Fifteen admissions were angiogrammed and 14 (93%) were confirmatory or else strongly supported the diagnosis. Surgery was performed in 13 and confirmed the diagnoses in each case. Postmortem confirmed the diagnosis in one additional case not having surgery for a total diagnosis confirmation of 17 (94%). One subdural suspect signed himself out against medical advice on the second day.

Six (33%) admissions were below age 50 and the peak age incidence was 60 to 69 or seven (39%). Men were clearly in the majority (13 or 72%). There was no peak month or seasonal incidence and the average period of hospitalization for those remaining beyond the second day was 38 days.

Fourteen diagnoses were made in other cerebrovascular disease categories or 2.8% of the total. These included epidural hematoma, one case; isolated cranial nerve involvement due to aneurysm, three cases; headache or epilepsy secondary to A-V malformation or aneurysm, nine cases and asymptomatic aneurysm or A-V malformation, one case. There was one death within this group, an epidural hematoma.

OVERVIEW

From 130,500 visits to Barnes Hospital clinics and emergency room during the period of this survey, there were 490 admissions for cerebrovascular diseases, an incidence of 0.4%. This is considerably less than the annual incidence of strokes in the United States population as a whole, which is estimated to be 1.5 to 1.7 per 1,000.^{1, 2, 3} Thus, the incidence of CVD admissions during the survey period was one fourth of what might be expected purely on the basis of the total outpatient population.

Within our survey population of 490, the incidence of various categories of disease was not unlike that found in other studies. For example, the Regional Medical Program for Western New York reported the following: 46.6% cerebral thrombosis and embolism; 14.6% intracerebral hemorrhage; 3.8% subarachnoid hemorrhage; and 35.0% other forms of cerebrovascular disease.⁴

Kannel reported a relative incidence within the Framingham stroke population of 63% thrombotic infarction, 15% embolic infarction, 4% intracerebral hemorrhage and 18% subarachnoid hemorrhage.² These differences in stroke incidences probably reflect the categories to which they are assigned as well as the inaccuracies in diagnosis with which all such surveys are plagued.

Kurland *et al* report that death from the initial episode of cerebral infarction occurs "early" in 15% to 20%.⁵ Life insurance tables indicate that approximately 21% of patients die from their first "stroke."⁶ Although our overall mortality rate was only 16%, the more significant mortality figure, which is in accord with the data of other reports, is that for combined thrombotic, embolic and hemorrhagic cerebrovascular disease. In this regard, our mortality rate of 20.9% (of 341 admissions) is no better than that of the nation at large.

The incidence of cerebrovascular disease in age-matched populations is reported to be higher in Negroes than in whites. Likewise, the mortality rates for Negroes are about 1.7 times higher than for a comparable population of whites.^{5, 7} The number of Negro admissions in our sample (89 or 18%) is too small to make significant comparisons in this regard. It is of passing interest to point out that Negroes accounted for 25% of the total deaths, 56% of the subdural hematomas and a disproportionately small percentage (6%) of CVD in the non-severe category of the acute, ill-defined group. Such observations imply that cerebrovascular disease in the Negro admitted to our hospital is clearly defined symptomatically, more severe and more likely to result in death than in the white patient.

According to 1970 census records of the St. Louis Metropolitan area (St. Louis City, St. Louis County, Jefferson County, Franklin County and St. Charles County in Missouri), the non-white (97.5% Negro) population is 16.9% of the 1,826,907 total.⁷ Negro admissions to Barnes Hospital for strokes, therefore, are in proportion to their percentage of the total metropolitan area population.

The presence of certain "factors" and disease states has been related to an increased risk of stroke.^{3, 8} Table 1 lists the suspected contributory causes or associated diseases for the admissions in our survey. It is not surprising to find arteriosclerosis, hypertension, diabetes, heart disease and pulmonary conditions in high incidence. Although obesity, hyperuricemia, hyper-

TABLE 1

PERCENTAGES OF SUSPECTED CONTRIBUTORY
CAUSES AND SECONDARY DIAGNOSES IN 490
ADMISSIONS FOR CEREBROVASCULAR DISEASE
AT BARNES HOSPITAL DURING A ONE-YEAR
PERIOD

	%
Arteriosclerosis	52
Hypertension (150/90)	44
Diabetes	21
Cardiac arrhythmia	10
Congestive failure	9
Other cardiopathy	7
Pulmonary disease	7
Infections	4
Myocardial infarct	4
Alcoholism	3
Malignancy	3
Surgical complication	2
Non-surgical trauma	2
Thyroid dysfunction	2
Oral contraceptive use	2
Blood dyscrasia	1
Syphilis or pos. VDRL	1
Collagen disease	0.7
Coagulopathy	0.4
Pregnancy	0.2
Other	11
No contributory cause	3
Prior history of (CS) stroke	22

cholesterolemia, excessive cigarette smoking and positive family history of stroke are listed among the risk factors, they were rarely mentioned or even looked for in the patients of our series. Of 49 women in our survey between 15 and 50 years of age, nine (18%) were known to be taking oral contraceptives when they had their stroke. The 40 remaining women may or may not have been taking the "pill." Our findings regarding risk factors only reaffirm existing opinion. It is of further interest to recognize the 22% incidence of second (or more) strokes in our series. This figure is similar to the percentage figure for recurrent stroke reported by Ibrahim *et al* in their survey of cerebrovascular disease in the hospitals of five counties of Western New York.⁴

Out of 1,000 cases of stroke studied subsequently at postmortem, Dalsgaard-Nielson found, under the best of circumstances, that the clinical diagnosis of intracerebral hemorrhage was correct only 65% of the time and that of thromboembolic infarction only 58% of the time.⁹ A relatively complete series of laboratory examinations was ordered on the majority of our patients and

specific consultations and tests were usually requested where the history indicated their necessity. Laboratory tests requested specifically for stroke diagnosis are listed in Table 2. Ophthalmodynamometry was rarely requested and there is no provision for thermography. No patient in this series was identified as having had isotope cerebral blood flow studies, which at that time was primarily a research technique of only questionable value in determining management of the patient. We believe that the diagnoses of 157 admissions were strongly supported by angiography or else confirmed unequivocally at surgery or postmortem in our series, an overall incidence of 32%. Thus, in this series, and probably elsewhere as well, the major proportion of diagnoses made of cerebrovascular syndromes is based exclusively on the history and physical examination, with the exception of subarachnoid hemorrhage, the diagnosis of which rests upon the demonstration of blood or hemoglobin breakdown products in the cerebrospinal fluid regardless of the history or neurological examination findings.

One might reasonably argue that the majority of patients are not admitted to the hospital for diagnosis, but for treatment. If we were to exclude the 66 admissions who underwent surgery, 78 (18%) of those remaining were treated specifically for stroke with long-term anticoagulants, 20 (5%) received short-term anticoagulation only and an additional 110 (26%) received specific therapy for a concurrent medical problem other than stroke. Thus 216 or 51% of the nonsurgical group (44% of the total CVD series) received supportive nursing care or no treatment at all, i.e., were in for diagnosis only. These figures are not at all surprising. It would appear that unless surgery is indicated or the diagnosis

TABLE 2

LABORATORY TESTS ON 490 CEREBROVASCULAR
DISEASE ADMISSIONS TO BARNES HOSPITAL

		%
Admission blood profile	487	99
Chest x-ray	382	78
Skull x-ray	363	74
EKG	348	71
EEG	255	52
Lumbar puncture	242	50
Cerebral angiogram	187	38
Isotope brain scan	187	38
Neck vessel angiogram	69	10
Echo-encephalogram	39	8

is in serious doubt, many patients with acute onset signs of cerebrovascular disease may do just as well at the present time to go promptly to a long-term hospital, a rehabilitation center or simply remain at home under the care of a physician and visiting nurse.

CONCLUSIONS

The number of patients with CVD admitted to Barnes Hospital during the survey-year was considerably less than what might be expected on the basis of the combined outpatient, emergency room and referral population alone. This may be an indication of our physicians' awareness of the limitations of stroke diagnosis and treatment or merely a diversion of patients to other area hospitals for treatment and rehabilitation. In this regard, our series contains a high proportion (24%) of ill-defined CVD, many of whom were admitted on an elective basis for diagnosis and observation, suggesting that admission for diagnosis might have played a more significant role than admission for treatment. This point is further supported by the high proportion (44%) of the entire group who received no specific treatment or who appeared to be in for diagnosis only.

In most series which make cerebral embolism a separate category from cerebral thrombosis, the relative incidence of embolism is given as 10% to 15%.^{2, 4, 10} It may, however, be as high as 40% of infarctions in the middle cerebral artery territory.¹¹ The apparently low incidence of embolism in our series probably is due to a reluctance on the part of our staff to make this diagnosis without definite clinical or adequate laboratory evidence.

The 8.6% incidence of subarachnoid hemorrhage also is somewhat low in comparison to other series.² It is conceivable that a few more may have been diagnosed had the cerebrospinal fluid been studied in the 50% of admissions who did not have spinal taps. Since blood in the spinal fluid is sometimes present with hemorrhagic infarctions, intracerebral hemorrhages and subdural hematomas, a sizable proportion of diagnoses of subarachnoid hemorrhage may have been secondary to other hemorrhagic states. There were several instances in our series in which this was known to be the case.

In most series reporting mortality rate from

CVD in a sample population, about 50% to 60% are due to infarction, 35% to hemorrhage and 5% to 15% to uncertain causes.⁵ In our survey, about 38% presumably died of infarction, 52% of hemorrhagic conditions and 10% from "uncertain cause" (including subdural hematoma). This may appear surprising in view of the relatively low proportion of hemorrhagic strokes in this series, which is 21% (including 17 of 28 posterior fossa infarction or hemorrhage), but the percentage of deaths from the initial attack of hemorrhagic stroke in our series is lower than most. We are concerned in our study with a hospital population and, therefore, with initial and early death. We have no follow-up information regarding the survival rates of our discharged patients.

Acknowledgement: The authors wish to express appreciation to the Bi-State Regional Medical Program for its support in the preparation of this paper.

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President's Message

AMA—1971

As a subject for editorialization, the AMA has not been attractive to many in recent years. However, at the recent AMA assembly at that great American sea spa, Atlantic City, N. J., our national organization seemed to take on a new posture, so that I am somewhat enthusiastic about reporting to you on this Annual Session.

The state of Missouri was remarkably evident throughout the deliberations of the AMA in this session. First, the Assembly was entertained by the singing doctors of Greene County, Mo. and the "Doctors" were never finer. Second, the resolution of the Reference Committee on the drug problem had a strong Missouri flavor as the result of the forceful resolution submitted by the Delegation from Missouri. This was among the important issues discussed at this assembly. Third, although defeated, Hector Benoit ran a superb race for membership on that very important Council on Medical Service. Hector was an extremely strong candidate and was defeated by only a few votes. He is known to the vast majority of Delegates of the AMA as lucid, poised, knowledgeable and articulate. I predict he will be a member of this Council very shortly.

Finally, I was impressed with the general manner in which the AMA Delegates from Missouri conducted themselves. They were informed and well organized. Delegates, Alternate Delegates, officers and staff were assigned to specific Reference Committees for coverage. Reports from Reference Committees were brought to caucus for general discussion of issues. In general, the Missouri State Medical Association was represented on the AMA scene with dignity and professionalism.

The posture of the AMA is unquestionably undergoing favorable change. It is no longer negative. It is positive, innovative and visionary in its programming. The commitment and responsibility of this national organization is big, big, BIG. We have an annual budget of \$35,000,000 now programmed into about five major commitments, i.e., (1) physician education, (2) patient orientation and public relations, (3) the study on mechanisms of health care delivery and health care costs, (4) medical manpower and (5) legislative and governmental relations.

The matter of bigness or smallness does not necessarily reflect capacity or quality, but the AMA is big and it can only be *strong* if it represents all of Medicine. Its impact on legislative affairs has increased immeasurably in the past four or five years, largely because of the effectiveness of its legislative arm and the various PAC movements of the states. The AMPAC movement, as well as the AMA, deserves your support both locally and nationally.

It is quite possible that the single most impressive occasion at the recent assembly was the speech by President Richard M. Nixon. After challenging the medical profession to concern itself further with the medical, moral and mental health of our nation, the President further stated that it is essential that Medicine becomes involved with the general politics of this nation as well as its health. In fact, he warned, "If we do not concern ourselves with politics as well as our profession, we will no longer have a profession to defend." These, I think, are words that will ring loud in our ears for some time to come.

Hopefully, most of you read in the *St. Louis Globe-Democrat* and the *Kansas City Star*, the "We Accept the Challenge, Mr. President" pages sponsored by the doctors of Missouri through the MSMA and the Medical Societies of St. Louis and Kansas City.

I hope you are all finding time to chase that little white ball, dust the roses, pick the tomatoes, dip a lure or, more important, have time to spend with your families during this summer. We look forward to seeing you all in the fall, refreshed and prepared again to have dialogue and good communications, so that we may take appropriate action on the complex affairs of Medicine today.



Gerald L. Miller, M.D.

Woman's Auxiliary



MSMA Woman's Auxiliary Receives National Recognition

The Woman's Auxiliary to the MSMA has won national recognition for its Environmental Health package program and exhibit. We are proud to report that the ideas and information contained in our package program, which was developed under the able leadership of Mrs. William M. (Pat) Walker, 1970-1971 President, are now being utilized by state auxiliaries throughout the United States.



Mrs. Frank J. Valach
President

It was my privilege, as our President, to present our Environmental Health exhibit at the AMA Auxiliary Convention in Atlantic City as Missouri's contribution to that Auxiliary's "Show and Tell." Although the exhibit arrived several days late, it attracted unusual attention and interest. As a result, (1) 22 state auxiliary presidents asked for our packet program for immediate use in their own states; (2) a representative of *MD's Wife*, the AMA Auxiliary magazine, interviewed Mrs. James N. Haddock, chairman of the Missouri Environmental Health Committee, and me for an article which is to be published soon for national distribution; and (3) I was interviewed on a program presented on closed circuit TV, a special feature of the AMA Convention.

Our Missouri Auxiliary was one of only two to be so honored by the AMA for outstanding projects developed during the past year, and each Missouri Auxiliary member who contributed to this program should be congratulated.

The AMA meeting proved to be gratifying to me in another respect. I, as others, have been extremely concerned about the frightening problem of drug addiction among the servicemen in Vietnam and their being discharged from service without any effort being made to detect this horrific habit or to help the individuals break it. The fact that they developed their addictions after induction is especially disturbing.

When it became known that President Nixon would address the AMA House of Delegates, my thoughts turned to this problem with the hope that he would express the Administration's deep concern about the drug problem, as the MSMA and Woman's Auxiliary have done. He did so and, as you now know, efforts are being made to solve this problem in Vietnam, as well as nationally. Also, three related bills are before the House of Representatives, hopefully to be passed as quickly as possible.

EDITORIAL

THE ART OF NURSING

The recent decision by the Board of General Hospital to reconsider its previously announced closing of Kansas City's oldest nursing school was brought about in no small way through unity of action by a very dedicated group of students in the school. They sent handwritten and typed letters to many area physicians and others seeking support.

The old question of diploma versus degree nursing schools has lost its significance to the more pressing problem of "bedside nursing."

At the one extreme, the young person entering nursing can seek to emulate a nurse on the coronary care unit who has the wondrous ability to diagnose cardiograms and initiate cardiac massage, but who is found not to record whether a postoperative patient with massive intestinal resection and a heart condition is stooling. Somewhere in the middle of the spectrum of nursing is the head nurse who pays more attention to her nurse-physician relations than to nurse-patient relations. Hopefully, she will have the administrative knack to see that patients are nursed properly, but still something is missing. Farther out is the nurse who "floats" and can never have the ability to enter into a personal relationship with many of her patients.

Whether the nurse has a degree (and therefore the ability to teach) or a diploma (and therefore is not able to teach), her goal in a hospital should be to understand each patient with his problems, including his disease process, and what her role is in helping to deal with those problems.

We like to think of hospital nursing schools as being the source of those nurses who will best deal personally with patients. But in these days of na-

tional accrediting of nursing schools, what the physician sees as ideal is not necessarily what the accrediting body sees. If nursing wishes to assume the highest image as a profession, it might start emphasizing that to many people a professional is somebody who doesn't punch a time clock. This observation is not made to provoke disagreement; it is meant to face a reality.

Physicians do not want a nurse to be poorly educated and poorly prepared to meet her goal in the hospital. We recognize the necessity of high quality in nursing education. But we need to encourage our nursing education colleagues, not only to develop their own science but *to pay attention to the art as well.*

St. Luke's, Research and General hospitals continue with diploma schools. Avila, hopefully the Metropolitan Junior College and other area colleges are offering college based nursing programs of various types. Expense to the hospital patient in paying for the nursing program in that hospital is as justifiable as the same patient expense in paying for house staff education. But the college programs should be fostered and the clinical facilities of area hospitals should be used to the fullest extent in these programs.

All of us need to work toward seeing that our hospitals are used effectively for educating nurses and that the financing of such efforts is put in the forefront of medical affairs.

ANDREW McCANSE, Editor
Greater Kansas City Medical Bulletin
May 15, 1971

IMPROVED ACCIDENT & HEALTH PROGRAMS

The Disability Income Policy sponsored by the Missouri State Medical Association since 1943 has now been made **GUARANTEED RENEWABLE** and income benefits are available up to \$300.00 weekly to members under age 56 subject to acceptance by the Company.

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COMMENT . . .

Our Readers Write

Dear Doctor Finnegan:

In a recent issue of *MISSOURI MEDICINE* in the column, "Medical Melange," an item about Dr. Ruth Seevers, Osceola, identified her as the first woman to be licensed as an M.D. in Missouri.

This story is incorrect.

The following women members of the St. Louis Medical Society were licensed before that date:

Mary McLean	1884
Henrietta Borck	1894
Adelheid Bedal	1894 or 1895
Helen Gibson	1901
Katherine Schaaf	1905
Rose Minnie Rose	1905
Grace Mountjoy	1906

I knew all these women except Doctor McLean, who died in 1930. Doctor Gibson and Doctor Mountjoy are still living.

Yours truly,
Mary Elizabeth Morris, M.D.
St. Louis

To the Editor:

Use of ultrasonic flowmeter techniques as an aid in the diagnosis and surgical correction of many vascular problems is making good progress in the state. We are grateful to *MISSOURI MEDICINE* for providing a channel of communication with the outlying physicians and surgeons who have expressed interest in our work here at the University of Missouri Medical Center.

Recently, we had the pleasure of presenting three papers on Doppler techniques at the American College of Surgeons, Missouri Chapter, meeting here in the state. We also had a short workshop at our Spring Clinical Conference on Trauma.

The acceptance of our work is due, in no small part, to the publication of our efforts by *MISSOURI MEDICINE*. We thank you for providing a means of communication.

Sincerely,
E. Lichti, Ph. D.
Department of Surgery
University of Missouri School of Medicine

Continuing Education Coming Events

- | | |
|-------------|---|
| Sept. 2 | Symposium—Alert: Heart Attack
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Sept. 23-24 | Inhalation Therapy Seminar
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Sept. 29 | Obesity Conference
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Oct. 13-14 | Non-Surgical Medical Emergencies
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Oct. 13-15 | Comprehensive Care for Neurological Disorders
Danciger Institute for Health Services
Menorah Medical Center, Kansas City 64110 |

County Society News

FIRST DISTRICT

COUNCILOR

JOHN N. MARTIN, M.D., ST. JOSEPH

BUCHANAN COUNTY MEDICAL SOCIETY

For the 19th consecutive year, the Buchanan County Medical Society and the Northwest Missouri Dental Society met in joint session. A dinner and program were held in the Empire Room of Hotel Robidoux on May 5. Seventy-five physicians and dentists attended the event.

Presiding jointly were the two Presidents: Dr. Sharon E. Waggoner, physician, and Dr. James M. Trout, dentist.

The speaker was Dr. G. O'Neil Proud, professor and head of the Department of Otorhinolaryngology at the Kansas University Medical Center, Kansas City, Kan. His topic, "Head and Neck Problems," proved to be of keen interest to members of both professions.

Doctor Proud was introduced by Dr. O. Earl Whitsell, also a specialist in disorders of the ear, nose and throat. Both physicians followed in the footsteps of their fathers in their specialty.

Arrangements for the meeting and program were made by the program chairmen of the two professional groups, Dr. Richard O. Craig of the Medical Society and Dr. K. L. Young of the Dental Society.

RANDAL W. WEED, M.D., *Secretary*

GRAND RIVER MEDICAL SOCIETY

The Grand River Medical Society held a dinner meeting at the Strand Hotel in Chillicothe on May 13. Thirty-four members, Auxiliary members and guests were present. The Auxiliary members held a separate meeting following the dinner.

Dr. Eugene E. Reeves, Director of the University Law Extension, University of Missouri, discussed "Privilege and Malpractice." The discussion was well received and appreciated.

Dr. Donald Dowell, program chairman, announced that plans for the June meeting had not been formulated. There being no further business, the meeting was adjourned.

FRANK R. DALEY, M.D., *Secretary*

SIXTH DISTRICT

COUNCILOR

WILLIAM D. BRADSHAW, M.D.,
CLINTON

WEST CENTRAL MISSOURI MEDICAL SOCIETY

The West Central Missouri Medical Society met at Glen's Cafe in Butler on May 13. A social hour preceded the dinner.

The meeting was called to order by Vice-President Glen Reid in the absence of President Robert Magee who was attending a seminar on infectious disease in Mexico. Doctor Reid introduced the speaker for the evening, Dr. Carl Paul Hungate, an industrial physician for the Ford Motor Company in Kansas City. Doctor Hungate gave an interesting talk on certain aspects of industrial medicine with special reference to abuse of health care and absenteeism.

A business meeting followed this presentation. The minutes of the previous meeting were read by the Secretary and approved. The Treasurer stated that the Medical Society is standing on a sound financial basis.

It was anticipated that the next meeting will be held in Nevada in June.

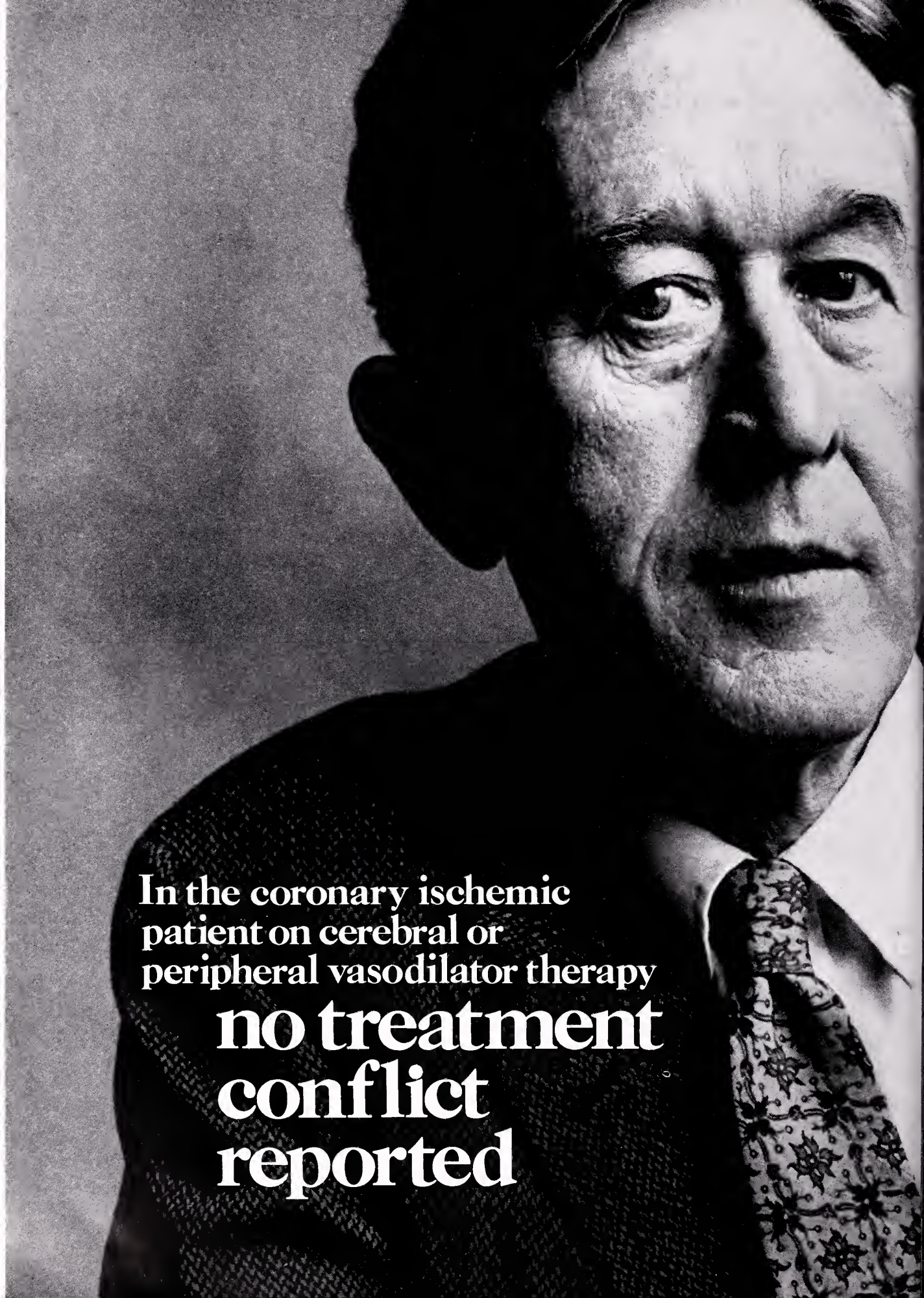
There being no further business, the meeting was adjourned.

R. JOHN TORONTOW, M.D., *Secretary*

(Continued on page 640)



"He's supposed to give a talk on safety at the hospital tomorrow!"



In the coronary ischemic
patient on cerebral or
peripheral vasodilator therapy

**no treatment
conflict
reported**

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- may be used in your patients with coronary insufficiency.
- conflicts have not been reported with diuretics, corticosteroids, antihypertensives or miotics.
- complications in the treatment of diabetes, hypertension, peptic ulcer, glaucoma or liver disease have not been reported.

In fact, there are no known contraindications in recommended oral doses other than it should not be given in the presence of frank arterial bleeding or immediately postpartum.

Although not all clinicians agree on the value of vasodilators in vascular disease, several investigators¹⁻⁴ have reported favorably on the effects of isoxsuprine. Effects have been demonstrated both by objective measurement^{2,4} and observation of clinical improvement.^{1,3}

Indications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebotic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). Composition: VASODILAN tablets, isoxsuprine HCl 10 mg. and 20 mg. Dosage: Oral—10 to 20 mg. t.i.d. or q.i.d. Contraindications and Cautions: There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. Side Effects: Occasional palpitation and dizziness can usually be controlled by dosage reduction. Complete details available in product brochure from Mead Johnson Laboratories. References: (1) Clarkson, I. S., and LePere, D. M.: *Angiology* 11:190-192 (June) 1960. (2) Horton, G. E., and Johnson, P. C., Jr.: *Angiology* 15:70-74 (Feb.) 1964. (3) Dhrymotos, A. D., and Whittier, J. R.: *Curr. Ther. Res.* 4:124-128 (April) 1962. (4) Whittier, J. R.: *Angiology* 15:82-87 (Feb.) 1964.

Mead Johnson
LABORATORIES

County Society News

(Continued from page 637)

TENTH DISTRICT

COUNCILOR

EUGENE T. HANSBROUGH, M.D.,
POPLAR BLUFF

MINERAL AREA COUNTY MEDICAL SOCIETY

The Mineral Area County Medical Society met at the Hctor Building in Farmington on May 27 at 8 PM.

The scientific portion of the program was presented by Dr. Malcom Foster, Professor of Medicine at Washington University in St. Louis, who discussed "The New Antibiotics." His interesting talk inspired an extensive period of discussion.

President Edward E. Mardini conducted the business meeting at which minutes of the previous meeting were read and approved. Dr. Robert F. Dettmer reported that Dr. Charles W. Gaskins, who had been a member of the Society for approximately 11 years, had died recently.

A letter from Dr. Robert A. Huckstep, who could not be present, was read. It requested that the Society take action on the problem of amphetamine prescriptions. Doctor Huckstep suggested that since the amphetamines are an easily abused drug and since several recent drug store robberies had been aimed at supplies of

Dexadrine and Desoxyn, that the Medical Society go on record as being opposed to the use of these drugs except in extraordinary circumstances. Dr. Charles E. Carleton moved and Dr. George A. Oliver seconded the motion that a letter be sent to the Pharmaceutical Association reporting the plans of the Society to use amphetamines only rarely and suggesting that the drug store stocks of these medications be reduced appropriately. The motion was approved by a vote of eight to one.

Drs. Kirby L. Turner, Norma D. Farmer and Charles W. Chastain reported on the recent Annual Session of the Missouri State Medical Association. Doctor Farmer, in particular, commented about the dedication and sincerity demonstrated by the Delegates at the convention and stated that it gave her a new respect for her profession.

The possibility of a summer picnic was discussed and it was decided to refer this matter to the Auxiliary for implementation.

The following were present at the meeting: Drs. Oliver, Carleton, Turner, Duncan, Richard A. Fraser, Mardini, Charles H. Appleberry, Farmer, Alvin G. Karraker, Juan Cancelada, Dettmer, Pichardo, Emmett F. Hctor, Metin Arat, Calixto Arguellas, Chastain and Foster. Mr. Jack Fowler and an associate from the Roerig Company were guests. The scientific program was sponsored by Roerig Company.

CHARLES W. CHASTAIN, M.D., *Secretary*

In Memoriam

Bohne, William R., M.D., St. Louis, a graduate of St. Louis University, 1921; member St. Louis Medical Society; age, 77; died April 26, 1971.

Walsh, Theodore E., M.D., St. Louis, a graduate of St. Thomas Medical School, England, 1925; member St. Louis Medical Society, age, 70; died April 29, 1971.

Wippo, E. W., M.D., St. Louis, a graduate of St. Louis University, 1909; member St. Louis Medical Society; age, 88; died May 3, 1971.

Farthing, Fred R., M.D., Springfield, a graduate of the University of Minnesota, 1930; member Greene County Medical Society; age, 66; died May 4, 1971.

Gaskins, Charles W., M.D., Fredericktown, a graduate of the University of Tennessee, 1932; member Mineral Area Medical Society; age, 66; died May 9, 1971.

Reis, Carl J., M.D., St. Louis, a graduate of St. Louis University, 1929; member St. Louis

Medical Society; age, 66; died May 15, 1971.

Lohr, Curtis H., M.D., St. Louis, a graduate of Washington University, 1922; member St. Louis Medical Society; age, 74; died May 27, 1971.

Dietrich, Karl David, M.D., Columbia, a graduate of Washington University, 1926; member Boone County Medical Society; age, 69; died June 4, 1971.

Polk, John W., M.D., Springfield, a graduate of the University of Arkansas, 1945; member Greene County Medical Society; age, 49; died June 14, 1971.

Baldwin, Paul, M.D., Kennett, a graduate of Washington University, 1904; member Dunklin County Medical Society; age, 91; died June 19, 1971.

Hardy, Joseph A., Jr., M.D., St. Louis, a graduate of St. Louis University, 1926; member St. Louis Medical Society; age, 69; died June 20, 1971.

New Members

Mario A. Coronado, M.D., Rt. #2, Box 7196, Arnold, has become a member of St. Louis Medical Society. Dr. Coronado is a native of Piura, Peru, received his preliminary education at the San Miguel High School and his M.D. degree at San Marcos University in 1958. He specializes in obstetrics and gynecology.

Eligio C. Cruz, M.D., 5505 Delmar Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Cruz is a native of Pasay City, Philippines, received his preliminary education at Letran College and his M.D. degree at the University of Santo Tomas in 1963. He specializes in obstetrics and gynecology.

Estelita Maria deUngria, M.D., 2601 N. Whittier, St. Louis, has become a member of St. Louis Medical Society. Dr. deUngria is a native of Bacolog, Philippines, received her preliminary education at the University of Santo Tomas and her M.D. degree at the University of Santo Tomas in 1957. She specializes in pediatrics.

Pablo Calma deUngria, Jr., M.D., 6744 Clayton Rd., St. Louis has become a member of St. Louis Medical Society. Dr. deUngria is a native of Tarlac, Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1957. He specializes in obstetrics and gynecology.

Elizabeth A. Evans, M.D., Bendix Corporation, Box 1159, Kansas City, has become a member of Jackson County Medical Society. Dr. Evans is a native of Oakland, Calif., received her preliminary education at the University of California and her M.D. degree at the University of California in 1965. She specializes in internal medicine.

James E. Everett, D.O., 4 West Dartmouth Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Everett is a native of Kansas City, received his preliminary education at Baker University and his D.O. degree at Kansas City College of Osteopathy and Surgery in 1936. He is in general practice.

Donald R. Feeley, M.D., 200 S. Hanley, St. Louis, has become a member of St. Louis Medical Society. Dr. Feeley is a native of Niagara Falls, N. Y., received his preliminary education at Bates College and his M.D. degree at Albany

Medical School. He specializes in certified occupational medicine.

Lees C. Forsythe, M.D., 4320 Wornall Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Forsythe is a native of St. Louis, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1964. He specializes in internal medicine.

John J. Kelly, M.D., 660 S. Euclid Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Kelly is a native of St. Louis, received his preliminary education at Rockhurst College and his M.D. degree at St. Louis University in 1963. He specializes in gastroenterology.

Jorge E. Kostianovsky, M.D., 58 Broadview Dr., St. Louis, has become a member of St. Louis Medical Society. Dr. Kostianovsky is a native of Concordia, Argentina, received his preliminary education at A. Carbo College and his M.D. degree at Litoral University in 1959. He specializes in child psychiatry.

Walter Ling, M.D., 5939 Nagel, St. Louis, has become a member of St. Louis Medical Society. Dr. Ling is a native of Swatow, China, received his preliminary education at Chulalongkorn University and his M.D. degree at Chulalongkorn University in 1963. He specializes in neurology and psychiatry.

Prasert Luangkesorn, M.D., 4672 S. Spring Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Luangkesorn is a native of Suphanburi, Thailand, received his M.D. degree at Siriraj Hospital School of Medicine in 1964. He specializes in plastic surgery.

Manuel I. Marban, M.D., 447 Foote Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Marban is a native of San Pablo, Philippines, received his preliminary education at Xavier University and his M.D. degree at the University of Santo Tomas in 1964. He specializes in pathology.

Abouzarjomehr Mazdai, M.D., 2601 Whittier, St. Louis, has become a member of St. Louis Medical Society. Dr. Mazdai is a native of Zahedan, Iran, received his preliminary education at Alhorz School and his M.D. degree at Tehran University in 1962. He specializes in surgery.

Otis O. Moseley, M.D., Osage Beach, has become a member of Cole County Medical Society. Dr. Moseley is a native of Eldon, received his preliminary education at the University of Missouri and his M.D. degree at Kansas University in 1957. He is in the general practice of medicine.

Tatool Ordoukhanian, M.D., 1301 Boonslick Rd., St. Charles, has become a member of St. Louis County Medical Society. Dr. Ordoukhanian is a native of Tabriz, Iran, received his preliminary education at Alborg College and his M.D. degree at Tehran University in 1958. He specializes in pediatrics.

Max Pepper, M.D., 1454 S. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Pepper is a native of Bayonne, N. J., received his preliminary education at Amherst College and his M.D. degree at the University of Pennsylvania in 1955. He specializes in community medicine.

Huseni Poonawala, M.D., 600 E. 22nd, Kansas City, has become a member of Jackson County Medical Society. Dr. Poonawala is a native of Poona, India, received his preliminary education at Bombay University and his M.D. degree at Poona University in 1959. He specializes in child psychiatry.

Antonio Q. Portugal, M.D., 634 N. Grand Blvd., St. Louis, has become a member of St. Louis Medical Society. Dr. Portugal is a native of the Philippines, received his preliminary education at the University of the Philippines and his M.D. degree at the University of the Philippines in 1961. He specializes in general surgery.

Oney C. Raines, III, M.D., 4124 Vivion Rd., Kansas City, has become a member of Clay County Medical Society. Dr. Raines is a native of Waco, Tex., received his preliminary education at Tulane University and his M.D. degree at Tulane Medical School in 1960. He specializes in obstetrics and gynecology.

Frederick L. Remark, M.D., 4960 Audubon Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Remark is a native of Canal Fulton, Ohio, received his preliminary education at Ohio Northern University and his M.D. degree at Ohio State University in 1964. He specializes in plastic surgery.

Luis M. Rodriguez, M.D., 16 Ellsworth Lane, St. Louis, has become a member of St. Louis

Medical Society. Dr. Rodriguez is a native of Rosario, Argentina, received his preliminary education at Rosario, Argentina High School and his M.D. degree at Litoral University in 1955. He is in general practice.

Alfred D. Roth, M.D., 24th and Gillham Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Roth is a native of Elizabeth, N. J., received his preliminary education at Duke University and his M.D. degree at the University of Heidelberg in 1964. He specializes in anesthesiology (pediatric).

Abdollah A. Sabet, M.D., #2 Westbury Dr., St. Charles, has become a member of St. Charles-Lincoln County Medical Society. Dr. Sabet is a native of Tabriz, Iran, received his preliminary education at the University of Tehran and his M.D. degree at the University of Tehran in 1960. He specializes in child and adolescent psychiatry.

Marcel Saghir, M.D., 4940 Audubon Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Saghir is a native of Amioun, Lebanon, received his preliminary education at American University of Beirut and his M.D. degree at American University of Beirut in 1963. He specializes in psychiatry.

Robert G. Scheibe, M.D., 4550 Scott Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Scheibe is a native of St. Louis, received his preliminary education at Washington University and his M.D. degree at Washington University in 1964. He specializes in urology.

Pravit Sinchai, M.D., 4424 Hampton Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Sinchai is a native of Trang, Thailand, received his preliminary education at Chulalongkorn University and his M.D. degree at Siriraj Medical School in 1963. He specializes in ophthalmology.

Maury Sosnoff, D.O., 8321 N. Broadway, St. Louis, has become a member of St. Louis Medical Society. Dr. Sosnoff is a native of St. Joseph, received his preliminary education at St. Louis College of Pharmacy and his D.O. degree at Kansas City College of Osteopathy and Surgery in 1963. He is in general practice.

Leonid Swidnicki, M.D., St. Elizabeth's and Levering Hospitals, Hannibal, has become a



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and Efudex® (fluorouracil) 5% cream can resolve it.

Call it actinic, solar or senile keratoses,
many regard it as "precancerous."^{1,2}

Topical fluorouracil, considered by some dermatologists to be a major advance in the treatment of multiple solar keratoses,^{3,4} offers the physician a relatively inexpensive alternative to cryosurgery, electrodesiccation and cold knife surgery. Of the topical fluorouracils available, only Efudex offers 2% and 5% solution and 5% cream formulations—formulations that have proved effective in the treatment of these multiple lesions.

Usual duration of therapy, 2 to 4 weeks.

Studies showed that with the 2% and 5% Efudex preparations, the usual duration of therapy was only 2 to 4 weeks.⁵ Other studies with topical fluorouracil revealed that when concentrations of less than 2% were used, significant numbers of lesions recurred.⁶

Treats the lesions you can't see, too.

Numerous lesions, not apparent prior to 2% and 5% Efudex therapy, manifested themselves by definite reactions, while intervening skin remained relatively unaffected.⁵ The early eradication of these subclinical lesions (which may otherwise have undergone further progression) probably accounts for the reduced incidence of future solar keratoses in patients treated with topical fluorouracil—especially with 5% concentrations.⁶

How to identify solar keratoses.

Typically, the lesion—a flat or slightly elevated brown to red-brown papule—is dry, rough, adherent and sharply defined. Multiple lesions are the rule.

Predictable therapeutic response.

The response to a typical course of Efudex therapy is usually characteristic and predictable. After 3 or 4 days of treatment, erythema begins to appear in the area of keratoses. This is followed by a moderate to intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of this response generally occurs two weeks after the start of therapy and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. Lesions that do not respond should be biopsied.

References: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, Grune & Stratton, 1967, p. 842. 2. Dillaha, C. J.; Jansen, G. T., and Honeycutt, W. M.: "Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *Pharmaceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, p. 92. 3. Belisario, J. C.: *Cutis*, 6:293, 1970. 4. Sams, W. M.: *Arch. Derm.*, 97:14, 1968. 5. Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. 6. Williams, A. C., and Klein, E.: *Cancer*, 25:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

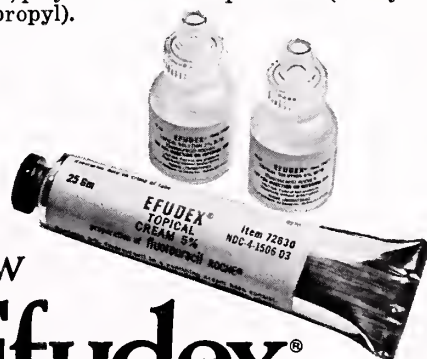
Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)amino-methane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



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cream/solution

member of Marion-Ralls-Shelby County Medical Society. Dr. Swidnicki is a native of Kowel, Poland, received his preliminary education at Municipal Lyceum and his M.D. degree at Ludwig-Maximilian University in 1954. He specializes in Anatomical and Clinical Pathology.

Primo R. Tamayo, M.D., 122-C Log Trail Dr., Ballwin, has become a member of St. Louis County Medical Society. Dr. Tamayo is a native of the Philippines, received his preliminary education at Far East University and his M.D. degree at Far East University in 1965. He specializes in internal medicine.

Houshang Vafi, M.D., 2 Westbury Dr., St. Charles, has become a member of St. Charles-Lincoln County Medical Society. Dr. Vafi is a native of Tehran, Iran, received his preliminary education at the University of Tehran and his M.D. degree at the University of Tehran in 1961. He specializes in psychiatry.

Benito I. Veluz, M.D., 6500 Chippewa, St. Louis, has become a member of St. Louis Medical Society. Dr. Veluz is a native of Lucena City, Philippines, received his preliminary education at National University and his M.D. degree at the University of Santo Tomas in 1960. He specializes in internal medicine.

Manuel A. Ventus, M.D., 6316 Hazelcrest Dr., Hazelwood, has become a member of St. Louis County Medical Society. Dr. Ventus is a native of the Philippines, received his preliminary education at St. Joseph School and his M.D. degree at University of Santo Tomas in 1962. He specializes in general surgery.

Lester E. Wall, M.D., 3720 Hampton Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Wall is a native of Richwood, Ohio, received his preliminary education at University of Dayton and his M.D. degree at St. Louis University in 1956. He specializes in allergy.

Council Reports

(Continued from page 602)

there are no M.D.'s involved and this is unfortunate, since they have been funded and it would be extremely unfortunate if this agency died. He urged the Councilor of that District to try to get an M.D. involved in this important work and stated the State Advisory Council would be happy to cooperate with him.

He said that the Lake Area centered around Springfield seems to be working very well. However, he appealed for more M.D. involvement in the Bootheel Area. This area has not as yet been funded, but is working on its own and desperately needs M.D. volunteers.

Dr. Kelley reported that CHP is planning three conferences to provide information on Health Maintenance Organizations to be held this summer in Springfield, Kansas City and St. Louis. They will be funded through CHP. He stated they would like the MSMA to be a co-sponsor of these meetings. The other sponsors are the Osteopathic Association, Nurses Association, Hospital Association, other organized medical groups and the funded CHP agencies, Lakes, Mid-America and ARCH in St. Louis. He stated the only organizations that have not indicated their sponsorship are the MSMA and the State Dental Association. Dr. Kelley urged the Council to co-sponsor these meetings, stating that to co-sponsor does not mean that HMO is the answer to the health care problems of the people. However, he said it would be extremely desirable to have a number of practicing physicians available to take part in the conferences from the standpoint of the practicing physician. These conferences would be for both providers and consumers, but primarily for providers.

The Chairman thanked Dr. Kelley for his report and

stated that the Council would discuss this in the Summary Session.

HEALTH CARE FOUNDATION

Dr. Benoit, Chairman of the Health Care Foundation, reported that the Board of Directors, Central Coordinating Committee and the Regional Panel Chairmen of the Foundation met on Friday afternoon, June 4, at the Ramada Inn in Jefferson City. After a general discussion of problems and methodology, the Central Coordinating Committee and the Regional Panel Chairmen met to study and develop guidelines that could be used by the review panels and third party carriers.

Dr. Benoit requested that Dr. Matthews give the Treasurer's report. Dr. Matthews reported the total income to date was \$3,600, based on the charge formula adopted by the Board. He said the overall expenses for the Foundation have been \$10,000 to date. He pointed out that income must be increased. It was suggested that a cost plus formula be adopted. The Board agreed with this concept.

Dr. Benoit reported that Dr. Matthews and Dr. Michaels were invited to attend the next meeting of the State Board of Healing Arts at which time two ex-officio members of the Judicial Committee would be appointed. He also reported on the National Peer Review Workshop in Chicago recently. Several ideas were expressed including the maintenance of anonymity in peer review cases and the inclusion of "consumers" in the peer review mechanism. The Board will consider this eventually.

Dr. Benoit reported that the Central Coordinating Committee presented a transmittal form to be used for

review committee information which was unanimously adopted. He reviewed the contents of the form for the Councilors.

Dr. Benoit stated that a copy of the Hennepin County Guidelines had been studied and it was agreed that these guidelines be sent to the state specialty societies with the request to review the guidelines and suggest any modifications. It also was agreed that these guidelines be sent to the Regional Review Panels for their use.

Discussion followed Dr. Benoit's report. Dr. Hetlage requested a copy of the Hennepin County Guidelines when they are available. It was pointed out that the cost prohibit all the Councilors receiving these guidelines, but it was suggested that a copy of the *AMA Peer Review Manual*, which is available at \$4.00 per copy, would be better for the Council.

Dr. Benoit also reported that the Kansas City Blue Shield has requested the Foundation to participate in their Annual Seminar to be held on July 19.

After discussion, on motion of Dr. Fisher, duly seconded, the Council accepted the report of the Health Care Foundation as educational and informational.

Summary Session Saturday, June 5, 11:30 AM

The Council held a summary session with only the Council and Officers present to discuss and take action regarding several items not included on the agenda.

The Council agreed that Dr. Byron Stuart of Boonville is the official representative of the MSMA to the MRMP Liaison Committee meetings and that Bob Carroll of the MSMA staff, who attends the Liaison Committee meeting with Dr. Stuart, be authorized to cast the Association's vote in the absence of Dr. Stuart.

The Council approved the formation of a joint Coordinating Committee to include the Division of Health, Missouri State Medical Association, Missouri Osteopathic Association and the Medical Schools concerned with physician placement.

The Council voted that MSMA be a co-sponsor of the regional conferences to be developed by the Missouri Comprehensive Health Planning Agency to inform physicians and others about Health Maintenance Organizations (HMO). This co-sponsorship is for the purpose of making information concerning HMO's available and in no way constitutes an endorsement of HMO's by the Missouri State Medical Association. A letter stating the Council's position and action taken on this matter will be sent to Dr. Kelley.

Council Minutes (Continued)

REPORT OF THE DEAN UNIVERSITY OF MISSOURI-COLUMBIA

Dr. William Mayer, Dean, University of Missouri School of Medicine, Columbia, discussed the financial needs of the Medical School. He indicated that about one eighth of the total University budget ends up in the Medical Center.

Dr. Mayer then spoke on the issue of out-of-state students at the Medical School. He stated that he felt they have an obligation to take some out-of-state students, since there are Missouri residents going to other state schools. He indicated that last year, 11 Missouri residents started in state schools outside of the state of Missouri. He stated that for the coming year, ten out of approximately 800 out-of-state applicants have been accepted

to the Medical School and 90 Missourians out of approximately 380 applicants.

Dr. Miller asked Dr. Mayer to give the Council some insight into the current review methodology on admissions policy. Dr. Mayer stated that it is most important that they try to keep any type of political pressure out of the process and indicated that in the ten years he has been at the Medical School, at no time has the University authorized its approval for admission to other than true, bona fide students. Dr. Mayer stated that the Medical School currently has a 13-man Admissions Committee. In addition to full time positions, these individuals spend an average of seven hours per week, starting in September and going through March, working on the Admissions Committee. This 13-man Admissions Committee consists of one Assistant Dean, ten faculty members and two students. In addition to the student's undergraduate grade point average, the Admissions Committee reviews letters from their faculty, letters from individuals who have known them throughout the state. Each Missouri applicant to the School of Medicine is interviewed.

Dr. Mayer indicated that private physicians have not been brought into this process simply because of the time involved. He stated that the only preferences given are the preferences toward Missouri residents. He further indicated that of the ten out-of-state residents accepted for the coming year, five of these students have very close Missouri ties. He also has been receiving complaints about the increasing number of women students who are being accepted to the Medical School. Since April of this year when the Legislature appropriated monies for the Medical School at Kansas City, at the request of the Kansas City School, the Medical School at Columbia agreed to provide to the students the information that they should feel free to contact Dean Noback because they would be taking students.

Dr. Chandler stated that Dr. Noback had contacted the Jackson County Medical Society regarding physicians for interviewing purposes. They have initially appointed about 20 practicing physicians to interview prospective students, and Dr. Chandler stated that he was fortunate to be present for the first session.

The Chairman thanked Dr. Mayer for his report.

LEGISLATIVE REPORT

Dr. Matthews, Chairman of the Committee on Legislative Affairs, gave a brief rundown on the current status of medical and health legislation in the General Assembly. A complete legislative report will appear on a yellow insert page of the July Annual Session edition of *MISSOURI MEDICINE*. Dr. Matthews stated that, in general, medicine has come out of this session as well as or better than in past years and commended the staff and the physicians for their work and effort. He indicated that he felt good rapport has been established with the legislators.

Mr. McIntyre stated that we are not sure as yet what is going to happen to bills left on the House calendar at the close of the present session. It is rumored that these bills will be turned over to the Speaker of the House for his determination of what will happen to them. He possibly could refer those bills back in 1972 to the same committees, and they would have the authority to vote them out again if they so desired without any hearings. It may be that any bills left on the Senate calendar will die there. He said no one knows exactly what is going to happen, but there will have to be some definite rulings made in both houses.

The Chairman stated that MSMA is indebted to Dr. Matthews and the fine job he is doing. On motion of Dr. Miller, duly seconded, the report of the Committee on Legislative Affairs was accepted with commendation. Motion carried.

AMA DELEGATES' REPORT

Dr. Neilson reported that the Woman's Auxiliary exhibit on Environmental Health has made quite an impact on everyone who has viewed it. This exhibit will be displayed at the AMA Convention this month in Atlantic City and at the Fall Conference to be held in Chicago in October. He stated that the University Extension Center has agreed to bring the exhibit from Columbia to St. Louis. This includes the cratings. The cost of shipment from St. Louis to Atlantic City and return will be approximately \$55.00. He requested that the MSMA make funds available for shipment of the exhibit. On motion, duly seconded, it was agreed that MSMA support the Woman's Auxiliary program and make available to them the \$55 for shipment of the exhibit from St. Louis to Atlantic City and the return.

Dr. Neilson stated that he would introduce at the AMA the resolution on "Restrictions on Use of Stimulant Drugs" as directed by the 1971 MSMA House of Delegates.

Dr. Neilson said that Dr. Benoit is a candidate for a position on the AMA Council on Medical Service and that the delegation will be working hard to get him elected. He said that the Presidents of all State Medical Associations have been contacted by letter informing them of Dr. Benoit's candidacy and asking for support of their delegations.

Mr. McIntyre stated that the Interspecialty Commission had been informed of Dr. Benoit's candidacy and were asked to correspond with anyone they may know in the AMA House of Delegates asking for support of Dr. Benoit.

Dr. Fisher reported that Dr. Roth, AMA Speaker of the House, was very complimentary to Dr. Neilson's efforts in looking after him while in Missouri at the MSMA Annual Session.

On motion of Dr. Cope, duly seconded, the report of the AMA Delegates was approved. Motion carried.

REPORT OF COMMISSIONS ON CONTINUING EDUCATION AND INTERSPECIALTY

In the absence of the chairmen of the two Commissions, Dr. Matthews gave the following report of the Commission on Continuing Education and Health Manpower and the Commission on Interspecialty Medicine. These two Commissions held a joint meeting in Jefferson City on May 23. Monitors and Moderators participating in the 113th Annual Session reported on their respective scientific sessions. From more than 600 physicians registered at the 1971 meeting, the total number of physicians in attendance at scientific sessions at any one time varied from about 50 to 150. An attempt has been made in the past to give every subspecialty its turn on the program and certain groups have regularly-sponsored sessions. The lack of general attendance seems to be evidence that some change is necessary if the annual meetings of MSMA are to continue to attract physicians. Because of this, both Commissions were sent a letter regarding a proposed new format and a favorable response was almost unanimous. A summarization of the new format is,

in essence, that the MSMA would hold its annual meeting in conjunction with the annual meetings of specialty and subspecialty or general practice groups that would care to participate. In this way, each specialty group would be responsible for its own program as it normally is at its regular annual meeting and would accordingly also be responsible for attendance at those meetings.

Dr. Matthews suggested that if the Council approves the idea of the Program Committee, that serious consideration be given to developing sections, i.e., general medicine, internal medicine, surgery, etc. They could all have their own section. This would help to strengthen the State Association by bringing these groups into more close relationship with MSMA. He stated that if the section idea is considered, it might be referred to the Committee on Planning for further investigation as to how this might be done and for their opinion of it before any action is taken.

Dr. Matthews stated that several of the specialty groups have already accepted this idea and are willing to go ahead with it. He further stated that it was not the Commission's intent that the specialty groups direct their programs to the general interest, but they would present them as usual to appeal to their own members. In order to allow sufficient time for scientific sessions of this nature, some change in scheduling of the meetings would be necessary. The following schedule was suggested:

Friday, April 7

8:30-10:00 General session on Peer Review
10:30-12:00 Scientific sessions
1:30- 4:00 Scientific sessions with a break midway to visit exhibits

Saturday, April 8

8:30-10:00 Comparative costs of different modes of medical care
10:30-12:00 Scientific sessions
1:30- 2:30 General session on HMO
3:00- 5:00 Scientific sessions

All groups are being contacted in order to obtain definite commitments with respect to their participation. The Commission felt this might bring the specialty groups together and would aid in boosting attendance at the scientific sessions. Dr. Matthews stated that the Commission would like to have some expression from the Council regarding their views on this matter.

Dr. Matthews indicated that it also was brought out at the meeting of the Commissions that house officers and younger men in practice might be given an opportunity to participate in the scientific programs. It was felt that this could more easily be accomplished through the specialty sections, as it is currently being done, for example, in the American College of Physicians' meeting.

Dr. Bradshaw stated that these sessions of the specialty organizations should be scheduled at times that would not conflict with MSMA scheduling. Mr. Fox stated that MSMA would still have the role of coordinating all of these groups with respect to meeting space, time, etc. and, in addition, the MSMA would be responsible for several general interest sessions to run at a time not in conflict with other sessions and to continue to arrange the annual luncheons and dinner meetings. Of course, all should respect the period of time to review exhibits.

Dr. McAlhany inquired as to whether or not an orien-

tation program similar to the one which was held preceding the 1971 Annual Session was being planned for the next meeting.

Dr. Fisher indicated that the comments he received regarding the orientation program were good and the young physicians who attended were very appreciative of it. They were of the opinion that this would be good for every member of MSMA. Dr. Fisher felt that this should be continued at least for several years.

It was suggested that perhaps a more informal type of program that could involve dialogue among the new members might be better.

Discussion followed regarding the fact that about four county societies are presently having orientation programs for their members and perhaps this would be a duplication. Mention was made of the possibility of having these orientation programs on a district level. However, in some of the more rural areas, some districts would have very few new members.

It was generally agreed that the orientation program should be continued at the state level and that possibly the best time for this would be in conjunction with the Annual County Society Officers' Conference.

Dr. Miller suggested that the Commission on Continuing Education should give thought to having an MMPAC dinner during the Annual Session.

Dr. Hetlage stated that he felt consideration should be given to a change in the Annual Session meeting place, indicating that he felt poor attendance at the meeting is due to some extent to the facilities.

Mr. McIntyre indicated that the next Council Meeting will be held at Stouffer's Inn in St. Louis. This will give the Council and Officers an opportunity to look over the facility for possible future annual sessions.

Mr. Fox said that exhibit space is one of our major problems now. Very few hotels have the facilities for a large number of exhibits. Dr. Cope suggested that the exhibitors might consider merely making a donation in lieu of an actual exhibit with their firms being credited for this donation.

On motion of Dr. Gunn, duly seconded, the report of the Commission on Continuing Education and Health Manpower and Commission on Interspecialty Medicine was approved, including Dr. Matthew's suggestion of a feasibility study regarding the section idea. Motion carried.

Summary Session

Sunday Afternoon—June 5

Dr. Fisher inquired as to whether or not it is necessary to have summary or Executive Sessions following each session of the Council, for instance, Saturday morning, Saturday afternoon and Sunday morning.

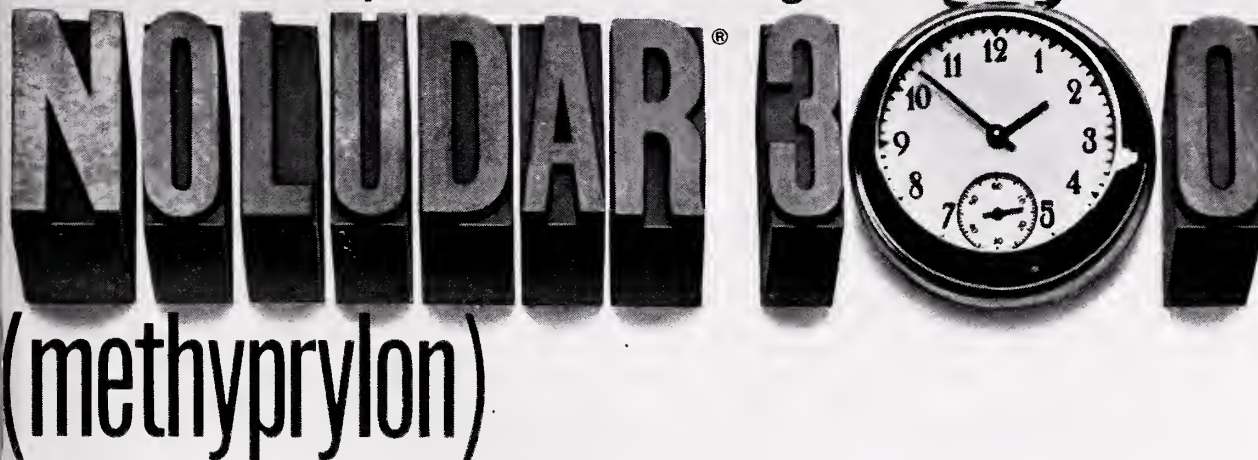
The question was raised as to whether or not the minutes of these special sessions would be published.

Dr. Cope indicated that perhaps these meetings should be called summary sessions, instead of executive sessions, and that at least one summary session should be scheduled for each Council Meeting.

Dr. Franklin indicated that he saw no reason why the minutes of these sessions should not be published, except, of course, in special instances to be determined by the Council.

Dr. Hetlage asked if business comes up between the time Councilors are asked for items to be put on the agenda and the time of the meeting, how to introduce them. He was informed that these matters can be

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INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with

withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

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brought up during the Councilor District reports.

The meeting adjourned at 4:00 P.M.

Council Meetings (Continued)

MEDICAID PROGRAM

The Chairman called on Dr. Peterson to discuss a matter pertaining to the Division of Welfare Medicaid Program. Dr. Peterson referred to a letter dated May 28, 1971 from Mr. Proctor Carter to "All Physicians Participating in the Missouri Title XIX (Medicaid) Program." Paragraph 2 of this letter says that presently there is being placed on some patients' orange cards certain restrictions and certain conditions, such as what physician, what hospital, what pharmacy may be used by this patient. Dr. Peterson indicated that this was done without the knowledge of the Advisory Committee of which he is a member.

It was brought out that this has been protested by a number of physicians. It was stated that, no doubt, this is being done to eliminate over-utilization of the program by some Medicaid patients.

After further discussion, Dr. Hansbrough moved that a letter be written to Mr. Carter asking for clarification as to numbers and how they are selected and express to him an interest in helping solve the problem. Motion was seconded and carried. It also was agreed that the letter be written by Dr. Stricker as Chairman of the Council.

REPORT OF COUNCIL COMMITTEE ON MEMBERSHIP COMMUNICATIONS

Dr. Franklin, Chairman of the special Council Committee on Membership Communications, gave the following report regarding his Committee meeting held on Friday, June 4. All members of the Committee were present with the exception of Dr. McAlhany, who sent his suggestions. Drs. Stricker, Miller, Gunn and Bradshaw also were in attendance.

Dr. Franklin indicated that he was indebted to Dr. Cope who sat down and prepared an excellent two-page outline on what he thought communications should be. Communications were discussed thoroughly as to possible ways and means of handling such, with the Committee offering the following suggestions:

It was agreed that *MISSOURI MEDICINE* should remain our prime means for member communications, although Dr. Cope suggested that we get an off-set press to help in sending out materials to keep our members informed. Dr. Cope also suggested having liaison officers in each hospital who might keep their staff members informed on current matters, these liaison officers to be appointed by the Council. Other suggestions included having a "Letters to the Editor" column in *MISSOURI MEDICINE*, so that controversial subjects could be discussed by people writing to *MISSOURI MEDICINE*.

Dr. Franklin reported that, in final conclusion it was agreed, as suggested by Dr. Miller, that this Committee should be an on-going one, but we should include the Editor of *MISSOURI MEDICINE* in the group, either as part of the committee or as a consultant; someone from the Interspecialty group; and possibly somebody representing the young members of MSMA.

Another suggestion made at the committee meeting was that frequently MSMA should publish a green information sheet similar to that published by AMA. Dr. Cope stated that these could be mailed in bulk to the

hospital liaison officers for distribution to the physicians.

Dr. Miller suggested that consideration might be given to presenting a journalism award annually, which might be for both professional and lay writers, for an outstanding article which received wide press.

Dr. Hetlage outlined plans regarding communication with the physicians for his Councilor District. He stated that prior to the Council Meeting, he held a meeting of the Presidents, Vice-Presidents and Delegates of the county societies in his district. During that meeting, he agreed to send out a newsletter to each member of his Councilor District informing him of actions taken by the Council. He asked the Council for approval of this idea. Dr. Hetlage was informed that this matter is the prerogative of the Councilor. Dr. Cope suggested that the MSMA office could address stamped envelopes for his mailings, if he will furnish them.

Dr. Fisher stated that he felt that the Councilor from the Third District and the President-Elect might visit with the editor of "News and Views" and have an article in hand explaining in detail the Health Care Foundation of Missouri in such a way that the editor might desire to publish it.

Dr. Bradshaw indicated that he felt that continued education regarding the HCF is most important and information such as Dr. Benoit's report should be disseminated.

On motion of Dr. Cope, duly seconded, the report of the Council Committee on Membership Communications was accepted.

Dr. Cope asked for clarification of the exact responsibility of the Committee. Dr. Bradshaw explained that the intent of his motion in the formation of the Committee was to explore all avenues of communications in order to better inform the MSMA membership.

Dr. Hetlage suggested a possible question-and-answer type column in the Journal. Dr. Miller stated that Mr. Noble had given him suggestions regarding a column in the Journal on how and why the HCF was initiated and have a column each month with up-to-date information regarding the Foundation.

Dr. Bradshaw moved that the staff be directed to set a special column in each issue of *MISSOURI MEDICINE* for the purpose of keeping the membership of the Association informed on the progress of the HCF. Dr. Fisher amended the motion to include the notification concerning the article, including the page number, be printed in a distinctive color on the cover page of the Journal to direct the membership to the article. The amended motion was duly seconded and carried.

Mr. McIntyre indicated that he felt this article should be cleared by someone each month prior to its appearance in the Journal. It was agreed that the Chairman of the HCF should review the article.

Dr. Fisher, Immediate Past-President, suggested that the Council consider how to manage the student members and how to entice House Officers to become active and participate in our Association. In reviewing the By-Laws, he said we might make all students and house officers associate members of the Association, which does not entitle them to vote. He also suggested that student to the House of Delegates and these delegates would be organizations, such as SAMA and organizations of House Physicians, residents and interns, might elect delegates granted the privilege of voting and serving on reference committees and, also, introducing resolutions, if they so desire. This could perhaps amount to three delegates and

three alternates. Possibly, some of our problems could be resolved. It was pointed out that they should all be encouraged to be members of both the county society and the state association.

After further discussion, on motion of Dr. Fisher, duly seconded, it was agreed that the matter of student membership, as well as intern and resident membership, be referred to the standing Committee on Constitution and By-Laws for study and recommendations.

Dr. Miller again brought up the subject of CMT and CPT, four- and five-digit systems with the recommendation that MSMA endorse the five-digit system. He stated that it is essential to have a uniform nomenclature. He also stated that with the addition of new terminology, the four-digit system would not be adequate much longer. On motion of Dr. Miller, duly seconded, the Council agreed to adopt this recommendation along with suitable measures for implementation. It also was agreed that Dr. Miller, as President of MSMA, will forward a letter to this effect to Dr. Howard, Executive Vice-President of AMA.

COUNCILOR DISTRICT REPORTS

Dr. Martin, First District, introduced the subject of the possible hyphenation of Clay and Platte Counties Medical Societies. He said that an opinion was rendered by Legal Counsel which stated that if the hyphenation were accomplished, under interpretation of the present MSMA By-Laws, they would lose one delegate. After further discussion, it was suggested that this matter be referred to the Committee on Constitution and By-Laws for study and recommendation.

Dr. Franklin, Third District, reported on the success of the Legislative Dinner which was sponsored by the St. Louis Medical Society, stating that this affair was handled very well by Dr. O'Neal, the President and the Executive Secretary, Mr. Smith.

Dr. Franklin stated that Dr. Kerr, Chairman of the Medical Advisory Committee to Selective Service System, sent a letter which he requested to be brought before the Council regarding a physician who has been classified as a Conscientious Objector and requested he spend his two years working in a general medical practice in some rural area where a physician is needed. Dr. Kerr indicated that there was no method of financing for this type of thing, other than the fees which he would receive. However, some localities might be willing to help set a man up in practice. It was Dr. Kerr's thought that the State Association should be aware of this situation. After general discussion, it was agreed that Dr. Kerr get in touch with several of the Councilors who expressed their interest.

Dr. Hetlage, Fourth District, reported that the most active medical societies in his District are St. Louis County and St. Charles-Lincoln. Jefferson County and Franklin-Gasconade-Warren are not as active, but he hopes to get the latter societies back on a more active basis.

Dr. Hetlage reported that he has interviewed approximately 20 men who have returned from Viet Nam in the past six months. He stated that the heroin addiction of the Armed Forces in Viet Nam is high. Many of these addicts do not submit to the present amnesty program, which says that if a man presents himself to his chaplain or physician and asks for treatment, he can be cured without this appearing on his army record. Dr. Hetlage

indicated that he is very concerned about this problem and the heavy load it will place on physicians and on society as these servicemen are discharged. He referred to three bills which are presently being considered by the House Armed Services Committee regarding drug addiction in Viet Nam. Particular reference was made to House Resolution 8436 which is the strongest of the bills and spells out that addicts will not be discharged from the Armed Forces until it is proven that they are no longer addicted.

Dr. Hetlage moved that a letter be written to the U. S. Senators and Representatives from Missouri expressing our concern and indicating support for House Resolution 8436 and, also, that this matter be referred to the Commission on Public Affairs for further study and a report back to the Council. Dr. Miller amended the motion to include that a resolution to this effect be prepared to be submitted to the AMA House of Delegates at the meeting in June. The amended motion was seconded and carried.

Dr. Peterson indicated that Dr. Hall is on this Armed Services Committee and he would speak to Dr. Hall regarding this legislation.

Dr. Cope, Fifth District, reported that he had received a letter from the Canadian Medical Protective Association regarding malpractice in Canada and how they handle it, copies of which were distributed to the Council. He stated that he felt this would be of interest to the Councilors.

Dr. McAlhany, Eighth District, gave a brief report on the controversy between IRS and the Greene County "Singing Doctors."

Dr. McAlhany indicated that Greene County Medical Society held its annual meeting with the Greene County Bar Association last month. The Bar Association will meet this month and if they feel it is feasible, the Greene County Medical Society and the Bar Association will pursue further the possibility of entering into an arbitration panel in Greene County.

Dr. Chandler, Seventh District, reported that the Medical-Legal Committee of the Jackson County Medical Society met with its counterpart of the Kansas City Bar Association. Discussion was held regarding the development of an interprofessional code or at least updating the existing code and, also, the desirability of developing some type of medical-legal review system in cases of alleged medical malpractice.

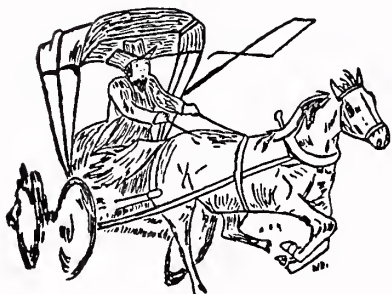
Dr. Chandler further reported that Kansas City Blue Shield has come to the County Medical Society asking for a pilot study to be made on the Certified Hospital Admissions Program (CHAP) type arrangements. This was sanctioned by the Society.

Regarding HMO's, Dr. Chandler indicated that, on two occasions, representatives of the Kaiser-Permanente Foundation have come to Kansas City and indications are that Kansas City may be under consideration for their program. On the second visit, he said they phoned Mr. Allen Smith and promised they would communicate further, but have not done so thus far.

NEXT COUNCIL MEETING

Dr. Gunn invited the Council to St. Louis for the next Council Meeting. The Council Meeting will be held at Stouffer's Inn on September 18 and 19, 1971.

Missouri Medicine in Review



FORTY YEARS AGO

St. Louis achieved what was characterized by Dr. Max X. Starkloff, city health commissioner, as "a truly remarkable result in the year's health record which surpasses, as a whole, any previous year in the city's history." This is especially noteworthy in view of the combination of unfavorable conditions of business depression, drouth, intense heat and cyclic recurrences of epidemics of measles.

The Federal Food and Drugs Act, popularly known as the Pure Food Law, was 25 years old on June 30. On June 30, 1906, President Theodore Roosevelt signed the act which was specifically designated "for preventing the manufacture, sale or transportation of adulterated or misbranded or deleterious foods, drugs, medicine and liquors, and for regulating traffic therein." Opposition to the passage of the law was bitter and violent. Dominant in the fight for pure foods and drugs was the late Dr. Harvey Washington Wiley, chief chemist of the U. S. Department of Agriculture during the period of the fight for the federal act. Much of the credit for passage of the law and its enforcement should go to him.

The new Menorah Hospital in Kansas City will be ready for occupancy on August 1. The institution, constructed at a cost of \$1,400,000, was erected by the Jewish Memorial Hospital Association, but will be nonsectarian. Dr. Alvin Lorie was elected president of the staff.

TWENTY-FIVE YEARS AGO

Gov. Phil M. Donnelly addressed the Annual Banquet at the 88th MSMA Annual Session on

March 25, 1946, in St. Louis. He said, "I feel that I am speaking to one of the most significant and important groups which it has been my privilege to appear before during the last year. This is the first convention of your great Association since the ending of the war, and I would like to say a word about the record of Missouri doctors in the war period."

Governor Donnelly pointed out that more than 950 practicing physicians in Missouri served in the Army, Navy and Marine Corps during World War II. He spoke of the two general hospital units in St. Louis, one staffed by physicians, nurses and enlisted men from Washington University, the other from St. Louis University. He cited two St. Louisans who had been awarded the Nobel prize: Dr. Edward A. Doisy, professor of biochemistry, for his research and discovery of vitamin K, and Dr. Joseph Erlanger, professor of physiology, for his notable research in the field of nerve physiology.

Governor Donnelly stated that "only 15 years after Missouri was admitted to the Union, in the year 1836, a group of St. Louis physicians founded the first medical association in Missouri. The group was incorporated on Jan. 25, 1837 as the Medical Society of Missouri. Its president was Dr. Bernard G. Farrar, who was the first American physician and surgeon to locate permanently west of the Mississippi River."

TEN YEARS AGO

Legislation during the year 1961 included the passage of H. B. 35 which required withholding of state income taxes by employers. This act, adopted by both Houses with an emergency clause, took effect July 1, 1961. It provides that all employers, including physicians, shall withhold state income taxes from wages of their employees and transmit such withheld wages to the state every three months.

H.B. 156, regarding competency of minors, provides that any married minor and any minor parent shall be considered to be an adult for the purpose of consenting to medical and surgical care for himself, his spouse or his child.

At a meeting in New York, the American Association of Plastic Surgeons elected Frank McDowell, M.D., St. Louis, as vice-president.

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other

antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. **Adults:** Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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SEPTEMBER, 1971

VOLUME 68, NUMBER 9

Special Report

**MISSOURI
DOCTORS
AND THE
PHYSICIAN
ASSISTANT**

By

**William
Stoneman III, M.D.**

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114th MSMA Annual Session

April 6-9, 1972, Kansas City

Patients fell asleep quickly

Dalmane (flurazepam HCl) 30 mg reduced awake time—both before and after falling asleep - by fifty percent of pretreatment values in patients with insomnia.^{1,2}

Two sleep laboratory studies recently confirmed findings of earlier studies of this type, namely, that Dalmane 30 mg was effective in patients who had trouble falling asleep, staying asleep or both. One 30-mg capsule of Dalmane usually induced sleep within 22 minutes, decreased the number of awakenings and the wake time after the onset of sleep, and provided 7 to 8 hours of sleep without need to repeat dosage during the night.

These studies utilized identical protocols and included eight insomniac patients. Sleep laboratory measurements in a limited number of patients are derived from all-night electroencephalographic, electro-oculographic and electromyographic tracings. Unlike traditional methods of evaluation, they are quantitative, reproducible and projectable to large numbers of subjects.

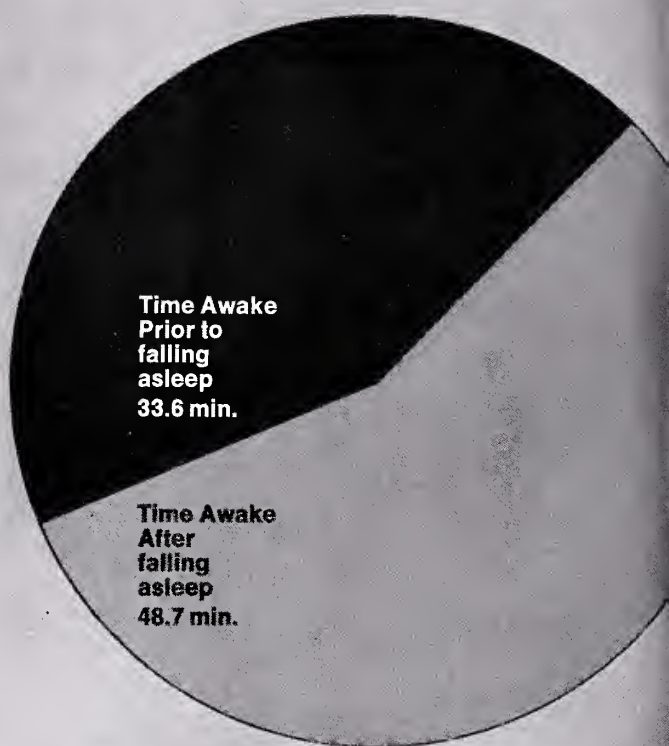
Results shown represent average values in all subjects for the three consecutive nights of placebo administration prior to Dalmane therapy and the seven consecutive nights on Dalmane 30 mg.

Dalmane is also relatively safe, as reported in clinical studies. Instances of morning "hang-over" have been relatively infrequent; paradoxical reactions (excitement) and hypotension have been rare. Dizziness, drowsiness, lightheadedness and the like were the side effects noted most frequently, particularly in the elderly or debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

References: 1. Frost, J. D., Jr.: "A System for Automatically Analyzing Sleep," Scientific Exhibit presented at Clinical Convention, A.M.A., Boston, Nov. 29-Dec. 2, 1970, and Aerospace M.A., Houston, April 26-29, 1971.

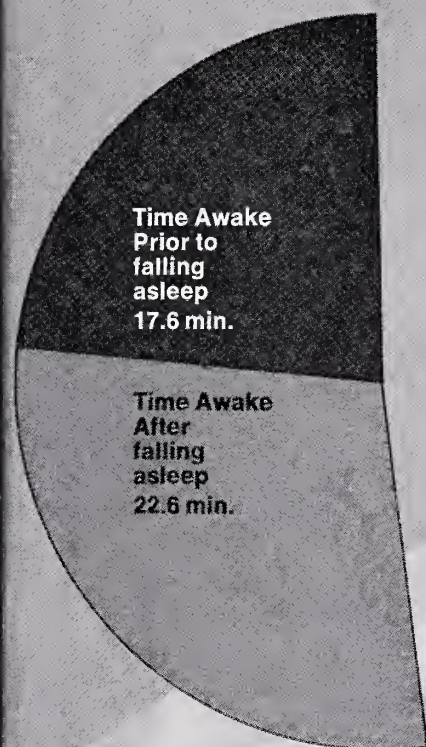
2. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley, N.J.

Before
Dalmane
(flurazepam HCl)



and slept through the night

On
Dalmane
(flurazepam HCl)



average sleep laboratory measurements in cited studies

parameter	Before Dalmane	On Dalmane
time required to fall asleep	33.6 min.	17.6 min.
time after onset of sleep	48.7 min.	22.6 min.
number of wakeful periods after onset of sleep	12.2	8.4
total sleep time	420.0 min.	447.5 min.
total sleep percent	88.6	94.5

clinical effectiveness as
shown in the sleep laboratory

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Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

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Missouri Medicine

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Contraindications: History of hypersensitivity to thiabendazole.

Warnings: May impair alertness; operation of automobiles and other activities made hazardous by diminished alertness should be avoided. If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed; erythema multiforme, including Stevens-Johnson syndrome (with a fatal case), has been associated with thiabendazole therapy in children. Safe use in pregnancy or lactation has not been established.

Precautions: Since thiabendazole is metabolized in the liver and excreted by the kidneys, hepatic and renal function should be carefully monitored in patients with dysfunction of these organs.

Adverse Reactions: Frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress,

pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, collapse, abnormal sensation in eyes, blurring of vision, hyperirritability, numbness, hyperglycemia, xanthopsia, enuresis, perianal rash, cholestasis and parenchymal liver damage, hypotension, and a transitory rise in cephalin flocculation and SGOT. Hypersensitivity reactions include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy. Appearance of live *Ascaris* in the mouth and nose has been reported on rare occasions.

Some patients may excrete a metabolite which imparts an odor to urine, much like that which occurs after ingestion of asparagus. Crystalluria without hematuria has been reported on occasion, but has promptly subsided with dis-

continuation of therapy; while the etiologic role of thiabendazole has not been established, the possibility of crystalluria should be kept in mind. Transient leukopenia has been reported in a few patients, but the cause and effect relationship in these cases has not been established.

NOTE: In children weighing less than 30 pounds, clinical experience with thiabendazole for treatment of intestinal parasitosis has been limited. Thus, the benefits of this therapy should be weighed against the possibility of adverse reactions.

Supplied: Suspension, containing 500 mg per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see the Direction Circular, Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

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AMA Cites Its Positive Record In Answering Kennedy's Charges

The American Medical Association has set forth its recent record in legislation - a record that shows statements in support of health care proposals in 31 of 35 appearances in the 91st Congress and support in the present Congress for medical school expansion, increased financial aid to medical students, family practice training programs and full funding for maternal and child care programs.

"It requires a certain strain on the process of human logic to interpret this record as negative," the AMA stated.

The AMA's record on legislation was submitted as part of a 39 page statement filed by the organization with the Subcommittee on Administrative Practice and procedure of the Senate Judiciary Committee. Subcommittee Chairman Sen. Edward M. Kennedy had charged the AMA with maintaining a negative and obstructionist attitude toward proposals to improve health care in the United States during a hearing by the Subcommittee on July 14.

Bills supported by the AMA in the 91st Congress included appropriations for hospital and medical facilities construction, appropriations for medical education, drug abuse education and narcotic addict rehabilitation, vaccination assistance programs and regional medical programs.

The AMA opposed as unnecessary the proposed Commission on Marihuana; opposed one version of the Occupational Safety and Health Act of 1969 but supported another version in both the Senate and House; and opposed certain parts of the Social Security

Amendments of 1970 while supporting other parts of the bill.

This affirmative legislative stance has been maintained in the present Congress, as many members of the Senate and House - from both sides of the aisle will attest, the AMA noted.

The AMA, in its testimony, pointed out that it has introduced its own proposal for financing health care - Medigap - which would provide government subsidized health insurance to the poor and insure against catastrophic medical costs.

"Medigap is designed to end for all Americans the burden of expense, and to make all Americans truly equal in their access to all types of medical care," the AMA said.

The organization warned against the "panacea" approach of a massive government health program as recommended by Senator Kennedy.

"We have learned that lesson in welfare and poverty. Must we learn it anew with health care?" the AMA asked.

Regarding specific charges leveled against the organization and doctors generally by Senator Kennedy, the AMA statement termed them "out of date, out of context and out of balance."

"And his conclusion, that doctors act primarily for gain, is outrageous," the AMA report stated.

Contrary to Senator Kennedy's charges, the AMA noted, it does not and has not opposed vaccination programs, group practice, an increase in the number of doctors, private health insurance, government support for medical education, innovations in medical school curricula, equal opportunity in medical education or peer review.

The AMA cited its public record and policy statements over the years to refute these charges in detail.

The AMA did object to Medicare at the time of its passage because it believed available government funds should not be used to provide assistance to those who did not need it and because of the unsound actuarial basis on which it was predicted. Premiums have since had to be raised several times to support the program, the AMA noted.

After Medicare became law, both the AMA and doctors generally gave it full support and worked to make the program a success, the report added.

In further response to other testimony before the Subcommittee on the same date, the AMA denied that it was responsible for "major weakening" of the proposals offered in 1964 by the Heart Disease, Cancer and Stroke Commission, which called for 60 regional clinical and care complexes.

Citing the record once again, the AMA pointed out that the

**MSMA
News**

(Continued on back of page)

Film Version Of Nixon Address Now Available

The Missouri State Medical Association has received a 24-minute edited film version of President Richard M. Nixon's address to the American Medical Association House of Delegates on June 22 at Atlantic City. The address, in color, is on 16 mm. film.

All county medical societies in Missouri have been informed of the film's availability for their use on a first come, first served basis.

In his address, President Nixon challenged the medical profession to assume a role of leadership in the nation and to work for the health and well being of society. The challenge was accepted by the medical profession and this acceptance was announced in full page newspaper advertisements in major newspapers including the St. Louis Globe-Democrat and the Kansas City Star. The advertisements in the two Missouri newspapers were purchased by the Missouri State Medical Association and local medical societies.

The address on film also includes President Nixon's admonition to those physicians who claim they are only interested in their profession to become interested in politics or they will not have a profession in which to be interested.

Still Receive Pledges

Pledges from Missouri physicians that they will restrict their use of amphetamines and other stimulant drugs in their practice are still being received in the Missouri State Medical Association office in Jefferson City.

Ambulance Districts May Be Organized

A new Missouri law which went into effect this summer allows for the establishment and operation of ambulance districts in Missouri. Senate Bill 108 passed by the 76th General Assembly provided the new ambulance district legislation.

Under provisions of S.B. 108 an ambulance district may be "created, incorporated and managed" and need not follow any existing governmental boundaries. To create an ambulance district a petition containing the signatures of at least 10 per cent of the voters who voted in the

POSITIVE RECORD (Continued)

legislation was hastily drawn and was submitted to Congress without sufficient supporting data. This fact was recognized and alluded to by Senator Kennedy himself at the time, the AMA noted.

Two of the Commission's own Subcommittees had serious reservations about the legislation, the AMA stated, and it was only after AMA officials worked in close cooperation with Johnson Administration officials that the bill was salvaged with an emphasis on pilot projects to test the theories and concepts advanced by the Commission.

The AMA completed its testimony by stating:

"Let us set aside old, worn-out charges. Let us set aside emotional language and political opportunism. Let us, instead, seek together valid and workable solutions to the health care problems that confront us.

"The AMA will support every such effort."

last gubernatorial election from the district area must be filed in the county which contains a greater part of the district.

After public hearing the issue is submitted to voters in the proposed district. A majority vote in favor creates the district. Districts are then divided into six subdistricts with directors elected from each to serve on the District Board. Approval of the district carries with it the authority for the Board of Directors to impose a property tax not to exceed fifteen cents per one hundred dollar of assessed valuation. Any additional indebtedness must be put to the voters of the district and requires a two-thirds majority.

Information concerning the new law is available from The Bureau of Emergency Medical Services, Missouri Division of Health, Broadway State Office Building, Jefferson City, Missouri 65101.

Extend Deadline

The Bureau of Narcotics and Dangerous Drugs has, for the second time, extended the period of registration by physicians under the Controlled Drug Act from July 29 to October 1 of this year. The extension came due to the backlog of registration applications and the heavy workload at the Bureau.

The Bureau said that prescriptions for controlled substances should include the following statement: "Federal registration applied for on

(date)



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(Warning—may be habit forming.)

 Empirin Compound with Codeine is now classified in Schedule III.
Available on oral prescription and may be refilled 5 times
within 6 months, unless restricted by State law.

Complete literature available on request from Professional Services Dept. PML.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Versapen[®]
(hetacillin)

Once in the patient's body, it rapidly hydrolyzes into ampicillin.

**IS
IT
JUST AN
AMPICILLIN?**

Extensive clinical experience has shown that this ampicillin derivative offers unique advantages over the ampicillin you may be presently prescribing:

1/ A uniform adult and a uniform pediatric dosage in all mild-to-moderate infections due to susceptible organisms—respiratory, genitourinary, G.I., skin and soft tissue.

Adults: 225 mg. q.i.d.

Children: 10 mg./lb./day in 4 equally divided doses.

The recommended dosage for Versapen (hetacillin) does not depend on site of infection, but on severity. Therefore, in mild-to-moderate infections due to susceptible organisms, you can prescribe Versapen (hetacillin) for the genitourinary tract at the same dose recommended for the respiratory tract. Or any other infection site.

2/ A low dosage for mild-to-moderate genitourinary infections due to susceptible organisms.

3/ A low dosage for mild-to-moderate pediatric infections due to susceptible organisms.

4/ Parenteral forms remain stable up to six hours after reconstitution with sterile water ...longer than any ampicillin.

5/ Lower patient cost. Inherent with lower dosages for many indications is the benefit of lower cost to the patient. And, in these many instances, Versapen is significantly more economical to the patient than ampicillin brands.

Side Effects. As with any penicillin serious allergic reactions, including anaphylaxis, can occur. The type of side effects most frequently encountered are the same as with ampicillin, namely: diarrhea, loose stools, rash and nausea.

Please see next page for brief summary of prescribing information.

BRISTOL

Versapen® (hetacillin)

Versapen®-K (potassium hetacillin)

■ Versatile dosage forms...for all patients...of all ages. ■ A uniform adult and a uniform pediatric dosage for all susceptible mild-to-moderate infections...respiratory, genitourinary, G.I., skin and soft tissue. Recommended dosage varies with severity, not site, of infection. ■ Parenteral forms remain stable up to six hours after reconstitution with sterile water ...longer than any ampicillin. ■ Economical therapy.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

(A) 12/28/70

For complete information, consult Official Package Circular.

Actions: Hetacillin provides bactericidal levels of ampicillin but has no antibacterial activity itself. It hydrolyzes to ampicillin and has a half-life of 20 minutes at pH 7.1.

Indications: Hetacillin is indicated in the treatment of susceptible strains of the following organisms in the diseases listed. Bacteriology studies to determine the causative organisms and their sensitivity should be performed. Therapy may be instituted prior to obtaining results of sensitivity testing.

Group A beta-hemolytic *Streptococcus*: Tonsillitis, pharyngitis, otitis media, skin and soft tissue infections.

Diplococcus pneumoniae: Broncho- and lobar pneumonia, otitis media.

Nonpenicillinase-producing *Staphylococcus aureus*: skin and soft tissue infections, otitis media.

H. influenzae: Bronchitis and bronchopneumonia.

Escherichia coli: Cystitis, pyelonephritis, prostatitis/urethritis, skin and soft tissue infections.

Proteus mirabilis: Cystitis, pyelonephritis, skin and soft tissue infections.

Enterococcus (Streptococcus faecalis): Cystitis, pyelonephritis, prostatitis/urethritis.

Shigella species: Shigellosis.

Salmonella species: Salmonellosis (parenteral only).

Indicated surgical procedures should be performed.

Use parenteral drug only in severe infections or in patients unable to take oral medications.

Contraindications: A history of allergic reactions to penicillins or lidocaine.

Warning: Anaphylaxis may occur, particularly after parenteral administration and especially in patients with an allergic diathesis. Check for a history of allergy to penicillins, cephalosporins or other allergens. If an allergic or anaphylactic reaction occurs, discontinue hetacillin and institute appropriate treatment.

Usage in Pregnancy: Safety for use in pregnancy is not established.

Precautions: Mycotic or bacterial superinfections may occur. Assess renal, hepatic and hematopoietic function periodically during long-term therapy. Because intravenous administration of potassium hetacillin in doses in excess of 5 mg./Kg. has been noted to enhance the vasopressor effect of epinephrine in dogs, precautions should be taken with patients receiving epinephrine concurrently.

Adverse Reactions: Untoward reactions include: Glossitis, stomatitis, black "hairy" tongue, nausea, vomiting and diarrhea, skin rashes, urticaria, exfoliative dermatitis, erythema multiforme and anaphylaxis (usually with parenteral administration). Anemia, thrombocytopenia, thrombocytopenic purpura, eosinophilia, leukopenia, and agranulocytosis have been noted, are usually reversible and are believed to be hypersensitivity phenomena.

Elevations in one or more liver function tests have been reported without any evidence of hepatic toxicity.

Local reactions: Thrombophlebitis at the site of intravenous injection has been reported.

Usual Dosage: Patients weighing 90 lbs. or more: 225 mg. q.i.d. Patients weighing less than 90 lbs.: 2.5 mg./lb. q.i.d.

Group A beta-hemolytic streptococcal infections should be treated for at least 10 days. Administer oral preparations in a fasting state to insure maximum absorption.

Recommended dosages (expressed in terms of ampicillin activity) in susceptible mild-to-moderate infections*

Versapen® (hetacillin) 112.5 mg.	Chewable Tablets	Usual pediatric dosage: 10 mg./lb./day in 4 equally divided doses. For a 45 lb. child: one tablet q.i.d.
	Oral Suspension (112.5 mg./5 ml.)	Usual pediatric dosage: 10 mg./lb./day in 4 equally divided doses. For a 45 lb. child: 1 tsp. q.i.d. Available in 40 ml., 80 ml., and new 100 ml. bottles.
	Pediatric Drops (112.5 mg./ml.)	Usual dosage: 10 mg./lb./day in 4 equally divided doses. For a 10 lb. child: ¼ dropper q.i.d. Available in 10 ml. bottles.
Versapen®-K (potassium hetacillin) 225 mg.	Capsules	Usual adult dosage: one 225 mg. capsule q.i.d.
	I.V. I.M. with Lidocaine HCl (20 mg./vial)	For patients weighing 90 lbs. or more: 225 mg. q.i.d. For patients weighing less than 90 lbs.: 10 mg./lb./day in 4 equally divided doses.

*For severe infections—Adults: 450 mg. q.i.d. Children up to 90 lbs.: 20 mg./lb./day in 4 equally divided doses.

Very serious infections may require very high doses and prolonged therapy.

Note: Versapen® has been issued Patent No. 3198804

BRISTOL

BRISTOL LABORATORIES/Division of Bristol-Myers Company/Syracuse, New York 13201

Special Article

Assuring the Quality of Health Care in the 1970's: The Physician's Responsibility

By

C. WESLEY EISELE, M.D.

Associate Dean for Postgraduate Medical Education
University of Colorado School of Medicine, Denver

The following is a transcript of the address which Doctor Eisele delivered at the 11th Annual M.D. Day at the University of Missouri School of Medicine on Oct. 23-24, 1970. Doctor Eisele also is Professor of Medicine and Professor of Preventive Medicine and Comprehensive Health Care.

HOW CAN WE HAVE ASSURANCE that health care is of high quality? And where does the responsibility for quality fall? There are many facets to these questions, but let me make it very clear that in the hospital, the standards and the quality of medical care are the legal responsibility of the governing board. Of this there can be no doubt for it has been made crystal clear by many recent court decisions, especially by the Darling case in Illinois in 1965. The hospital, whether it be private or public, is looked upon nowadays as a social institution and it answers to society through its board of trustees. There is even talk of the hospital being considered in the same light as a public utility.

So we must accept as a basic premise that the governing board carries the ultimate responsibility for the standards and the quality of medical care in the hospital. But how can this group of laymen effectively discharge such an awesome duty? They have neither the knowledge nor the professional judgment to evaluate personally the quality of care. Obviously, the board must delegate the day-by-day responsibility to the medical staff. While the governing board delegates the authority to the medical staff, it does not abdicate it or relegate its own responsibility and it must demand and receive from the Medical staff a regular accounting.

How can the medical staff ensure a uniformly high quality of care for *all* the patients throughout the institution? This can be done only by

means of a systematic and continuous medical audit. In essence, the medical staff does not have an option to do or not to do a medical audit. This is their obligation to the governing board, if not to themselves. Normally, the physician accepts this mandate from the board at least by implication when he becomes a member of the staff.

A medical audit requires extra work on the part of the staff physicians, work for which they are usually not compensated. How can physicians become motivated to perform this task? First of all, the time required of physicians must be kept to the bare minimum and their part must be restricted to those portions of the task which require professional judgment.

I know of only two sensible reasons which will motivate a physician to work effectively and even willingly on a medical audit committee. First of all, there must be a commitment to excellence of practice for himself and for his peers and, second, there must be a recognition that the medical audit is a superb medium for continuing medical education for himself and for his peers. For nearly 20 years, my major responsibility has been the development of opportunities for the continuing education of practicing physicians. Let me say that in my opinion, a well-motivated and properly executed medical audit is unsurpassed as a vehicle for continuing medical education. I have written and spoken about this many times. Traditionally, the thrust of

continuing medical education has been twofold: the short refresher course offered by medical schools and medical centers and the visiting professor or the teaching team that periodically visits the community hospital. However, these are merely the frosting on the cake.

There is an emerging consensus that significant continuing medical education must meet three basic criteria: (1) it must be continuous, (2) it must be based in the community hospital and (3) it must be relevant to the physician's day-to-day practice. I know of no other system that comes near to equalling the medical audit in fulfilling these criteria.

How does the medical staff go about conducting a medical audit?

Without going into detail, here are six essential *ingredients or principles*:

(1) The medical staff must first agree on its own standards of excellence and then measure its performance against these standards. Both of these steps can be high-level educational experiences.

(2) The medical audit generally should be conducted at a departmental level or a clinical service level. In small hospitals and in some other situations perhaps, it may be necessary to conduct the audit on a hospital-wide basis to cut and fit to meet local conditions.

(3) The hospital must provide essential tools and support for the staff to spare the physician all parts of the task except those involving medical judgment. Two things are necessary: (A) There must be a computerized data service and (B) there must be hospital personnel who are skilled in data retrieval.

(4) The medical staff should reorganize its committee structure so that the review process is conducted once only, not multiple times by different committees for fragments of the total review.

(5) The departmental audit committee should regularly survey the total patient population with the aid of computer printouts, seeking patterns of practice that point to deviations from norms and standards. They must seek patterns that pinpoint areas that require in-depth review.

(6) Finally, there must be a clear understanding that the medical audit committee is a fact finding and educational committee. It is not a policing or disciplinary committee. If serious or persistent deflections are noted, and this would be incidental to the committee's primary function, the information should be directed to the executive committee or to the departmental chief for any action that might be appropriate.

Let us go back to the tools that hospitals should provide to assist the medical staff in performing its most critical function. The hospital has an obligation to provide computer services that have two capabilities: first, to tabulate, analyze and display essential data on every patient, and then to provide comparisons of specific parameters of patient care with those in other similar hospitals. The other service that the hospital must provide is skilled personnel who are fully familiar with the data system and who are specially trained to retrieve specific data requested by the medical audit committees.

Now, about the computer service, the oldest and by far the most widely used hospital data system, and I believe by all odds the one that is the best and at the same time the most economical is the Professional Activity Study, commonly called PAS. This is the major program of the Commission of Professional and Hospital Activities, located in Ann Arbor, Mich. Doubtless, some of you know something about PAS, and you probably should know a great deal more for I find that 26 short-term general hospitals in Missouri subscribe to this program. These 26 Missouri hospitals care for 280,000 patients annually, which is about 42% of all the short-term general hospital patients cared for in the state. But I also find that most of these 26 hospitals entered the PAS system in the last year or so, so it is likely that many staff physicians know little or nothing about the program.

The Commission on Professional and Hospital Activities is now in its 15th year. It is a nonprofit education and research corporation sponsored by three national organizations: The American College of Physicians, The American College of Surgeons and The American Hospital Association.

The Professional Activity Study is the Commission's basic program, but it offers others such as the Medical Audit Program or MAP and the length-of-stay reports. These length-of-stay studies offer member hospitals specific length-of-stay reports based on its own patient mix by diagnostic and operation groups, comparing them with individually determined national norms derived from the 50 million case abstracts now in the Commission's computer library. These are the essential tools which I believe the hospital is obliged to provide for its medical staff.

The Commission has undergone phenomenal growth, moving from a handful of employees 15 years ago to more than 350 currently. There are more than 1,300 hospitals in 49 states and Canada now in the system. Together, these hospitals

care for 11 million patients annually, accounting for about one third of all the short-term general hospital patients in the United States and Canada. You will note that Missouri with its 42% of patients in the PAS beats the national average.

When a hospital joins PAS, it submits a case abstract in considerable detail on every patient discharged. The abstract takes an average of five minutes to complete. When this is done, all other record room functions are taken over by the computer. The hospital receives detailed listings containing the coded case abstracts on all its patients and, in addition, it receives all of its record room indexes—the diagnostic index, the operation index and the physician and surgeon indexes. It also receives a variety of statistical tabulations and displays. All of these services are merely by-products, however, and I want to emphasize this.

The great number of hospitals in the system makes it possible for each hospital to have anonymous comparisons of many facets of its practice with those in similar hospitals. These serve as very valuable bench marks for the medical staff in conducting their medical audit.

One might ask this question: If the Commission's programs are so good, why are there only 1,300 participating hospitals? Why shouldn't all hospitals be in PAS? Several possible explanations come to mind:

(1) In the first place, hospitals may not be familiar with the programs or they may have only vague and fragmentary information or even misinformation. The Commission has never engaged in a "sales campaign" or an advertising program. Its major promotion has been through scientific exhibits at medical and hospital conventions. Let me emphasize that this is a strictly voluntary program and the medical staff of a hospital must first give its approval before the Commission will accept that hospital in the system.

(2) Some hospitals have their own computers and they have believed that economies could be effected by running their own medical record program. But this is a false belief. Virtually always after spending years in development, they end up with a much inferior product at a greatly increased cost. At best, the medical staff is unable to make comparisons with a pool of data from other hospitals.

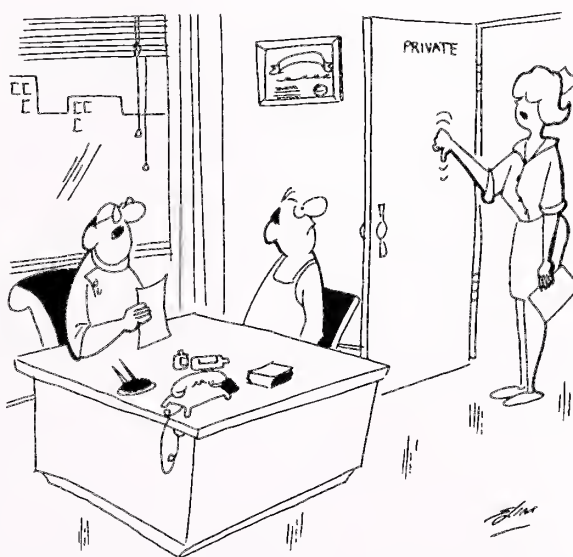
(3) A third reason why some hospitals have not joined PAS is somewhat similar. There are a half dozen or so local or regional hospital data systems which have sprung up around the country and they attempt to provide services some-

what similar to PAS, but in general they offer quite inferior copies at considerably higher costs. Together, these regional systems probably account for less than 5% of the short-term general hospital patients in the country.

In addition to getting a less satisfactory product at considerably higher cost, these hospitals are denied the expertise and the many consultation and educational services that the Commission has developed over a period of 15 years. For instance, I believe the Commission is the only organization that holds frequent tutorial sessions for the physicians and personnel of member hospitals, as well as telephone consultations and telephone conferences on request.

But there are two considerations that surpass all others in importance: (1) hospitals that use their own computers or participate in regional or local programs do not have access to the greatest computer library of case abstracts in the world, now exceeding 50 million cases, and (2) even more deplorably, these hospitals are not contributing their own data to the pool in the interests of the advancement of medicine and health care and the advancement of continuing medical education.

The importance of this data bank is illustrated by several studies on Acute Myocardial Infarction recently published by the Commission. More than 54,000 patients with acute myocardial infarction who were cared for in 1,172 PAS hospitals during the first six months of 1969 were the basis of these studies. One of the reports described some newly discovered, practical medical knowledge which may be applied in lower-



"Oh, good! Here's Miss Thomas with our lab report!"

ing the mortality of this disease, and this discovery would not have been possible without this large group of hospitals contributing their experience to form this pool or more than 50,000 patients with acute heart attacks.

Another report on this same group of heart attack patients shows quite conclusively that patients have considerably better chances of survival when cared for in hospitals that have coronary care units. The mortality rate was 21% for the 16,000 patients cared for in hospitals with CCU's compared to a mortality of 28% in the 39,000 patients in hospitals that did not have CCU's. This is an excess mortality of about one third in non-CCU hospitals. It is significant that this difference in mortality holds up whether or not the hospital is a major teaching hospital.

I have gone into some detail, perhaps more than I should, in discussing the tools that the hospital medical staff requires for an effective and efficient medical audit. Let me quickly make it clear that I do not consider subscribing to PAS or MAP to be a medical audit in itself. These are but the basic tools that the medical staff uses in performing its review. The staff must learn to use these tools, and this requires some thought and study and, perhaps, a trip to Ann Arbor to attend one of the Commission's two-day tutorial sessions.

Why should a hospital medical staff engage in a medical audit? They should do so to implement a major facet of their continuing medical education, to insure uniformly high quality medical care in their hospital and to demonstrate their dedication to excellence. This is the challenge facing physicians. But there is still an other reason. It is one which has become such a tired cliché that I am reluctant to use it, but, in truth, it is more pertinent today than ever before. "If we physicians do not do it, someone else will do it for us and likely do it in a way that we will not like."

It seems to me that it is a matter of the greatest importance to keep the medical audit in the hands of physicians at the grass roots level, to keep it within the hospital staff and to emphasize the educational aspects. I cannot conceive of a nationally organized audit program which would be fair and which could successfully include an educational program. The signs are ominous, however, and the time to get on with it is now.

In the words of that great American philosopher, Pogo: "We have met the enemy and he is us."

Reprints: C. Wesley Eisele, M.D.
4200 E. 9th Ave.
Denver, Colo. 80220

Pre-Sate® (chlorphentermine hydrochloride)

Caution: Federal law prohibits dispensing without prescription.

Indications

Pre-Sate (chlorphentermine hydrochloride) is indicated in exogenous obesity, as a short term (i.e. several weeks) adjunct in a regimen of weight reduction based upon caloric restriction.

Contraindications

Glaucoma, hyperthyroidism, pheochromocytoma, hypersensitivity to sympathomimetic amines, and agitated states. Pre-Sate (chlorphentermine hydrochloride) is also contraindicated in patients with a history of drug abuse or symptomatic cardiovascular disease of the following types: advanced arteriosclerosis, severe coronary artery disease, moderate to severe hypertension, or cardiac conduction abnormalities with danger of arrhythmias. The drug is also contraindicated during or within 14 days following administration of monamine oxidase inhibitors, since hypertensive crises may result.

Warnings

When weight loss is unsatisfactory the recommended dosage should not be increased in an attempt to obtain increased anorexic effect; discontinue the drug. Tolerance to the anorectic effect may develop. Drowsiness or stimulation may occur and may impair ability to engage in potentially hazardous activities such as operating machinery, driving a motor vehicle, or performing tasks requiring precision work or critical judgment. Therefore, such patients should be cautioned accordingly. Caution must be exercised if Pre-Sate (chlorphentermine hydrochloride) is used concomitantly with other central nervous system stimulants. There have been reports of pulmonary hypertension in patients who received related drugs.

Drug Dependence Drugs of this type have a potential for abuse. Patients have been known to increase the intake of drugs of this type to many times the dosages recommended. In long-term controlled studies with the high dosages of Pre-Sate, abrupt cessation did not result in symptoms of withdrawal.

Usage In Pregnancy The safety of Pre-Sate (chlorphentermine hydrochloride) in human pregnancy has not yet been clearly established. The use of anorectic agents by women who are or who may become pregnant, and especially those in the first trimester of pregnancy, requires that the potential benefit be weighed against the possible hazard to mother and child. Use of the drug during lactation is not recommended. Mammalian reproductive and teratogenic studies with high multiples of the human dose have been negative.

Usage In Children Not recommended for use in children under 12 years of age.

Precautions

In patients with diabetes mellitus there may be alteration of insulin requirements due to dietary restrictions and weight loss. Pre-Sate (chlorphentermine hydrochloride) should be used with caution when obesity complicates the management of patients with mild to moderate cardiovascular disease or diabetes mellitus, and only when dietary restriction alone has been unsuccessful in achieving desired weight reduction. In prescribing this drug for obese patients in whom it is undesirable to introduce CNS stimulation or pressor effect, the physician should be alert to the individual who may be overly sensitive to this drug. Psychologic disturbances have been reported in patients who concomitantly receive an anorectic agent and a restrictive dietary regimen.

Adverse Reactions

Central Nervous System: When CNS side effects occur, they are most often manifested as drowsiness or sedation or overstimulation and restlessness. Insomnia, dizziness, headache, euphoria, dysphoria, and tremor may also occur. Psychotic episodes, although rare, have been noted even at recommended doses. **Cardiovascular:** tachycardia, palpitation, elevation of blood pressure. **Gastrointestinal:** nausea and vomiting, diarrhea, unpleasant taste, constipation. **Endocrine:** changes in libido, impotence. **Autonomic:** dryness of mouth, sweating, mydriasis. **Allergic:** urticaria. **Genitourinary:** diuresis and, rarely, difficulty in initiating micturition. **Others:** Paresthesias, sural spasms.

Dosage and Administration

The recommended adult daily dose of Pre-Sate (chlorphentermine hydrochloride) is one tablet (equivalent to 65 mg chlorphentermine base) taken after the first meal of the day. Use in children under 12 not recommended.

Overdosage

Manifestations: Restlessness, confusion, assaultiveness, hallucinations, panic states, and hyperpyrexia may be manifestations of acute intoxication with anorectic agents. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension, or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma.

Management: Management of acute intoxication with sympathomimetic amines is largely symptomatic and supportive and often includes sedation with a barbiturate. If hypertension is marked, the use of a nitrate or rapidly acting alpha-receptor blocking agent should be considered. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendations in this regard.

How Supplied

Each Pre-Sate (chlorphentermine hydrochloride) tablet contains the equivalent of 65 mg chlorphentermine base; bottles of 100 and 1000 tablets.

Full information is available on request.

take a new
look at
Pre-Sate[®]
(chlorphentermine
HCl)

the increasingly practical
appetite suppressant

low potential for:

- ☐ stimulatory 'jolt'
- ☐ post-therapeutic 'let-down'
- ☐ excessive CNS stimulation
- ☐ drug abuse

Pre-Sate promotes normal patterns of food intake and is a safe, effective supplement to your total program of caloric reduction

**Pre-Sate — a short-term adjunct...
not a substitute...to your total
program of weight reduction**

Warner-Chilcott
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Morris Plains, New Jersey 07950

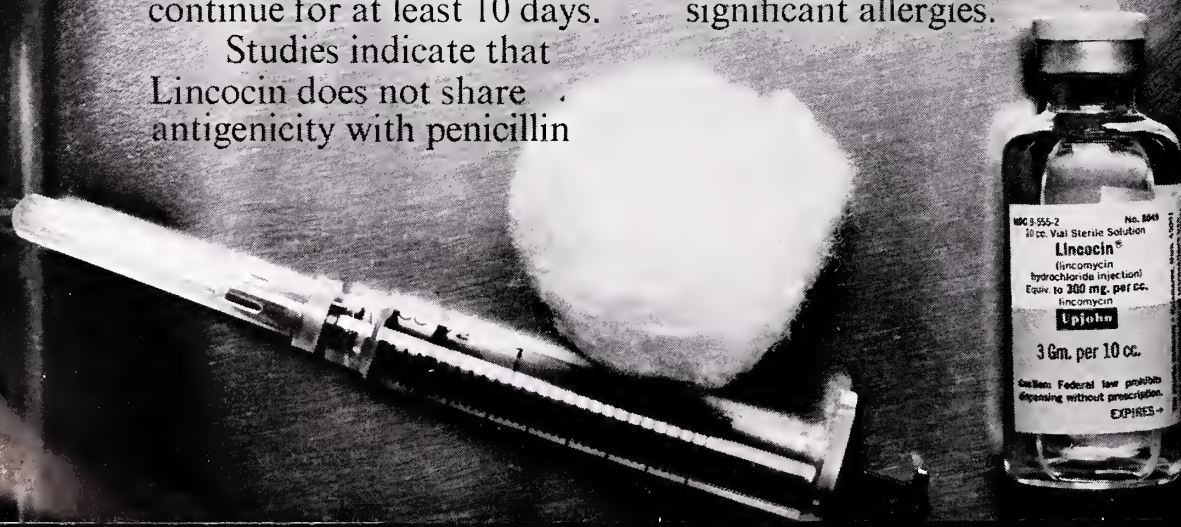


Hypersensitivity to penicillin is a good reason to consider Lincocin[®] (lincomycin hydrochloride)

Lincocin (lincomycin hydrochloride, Upjohn) has produced a high percentage of satisfactory responses in patients with mild, moderate and severe infections due to susceptible streptococci, pneumococci and staphylococci (including many penicillinase-producing strains). With β -hemolytic streptococcal infections, treatment should continue for at least 10 days.

Studies indicate that Lincocin does not share antigenicity with penicillin

compounds. However, hypersensitivity reactions such as angioneurotic edema, serum sickness and anaphylaxis have been reported, some of these in patients known to be sensitive to penicillin. As with any antibiotic, Lincocin (lincomycin hydrochloride, Upjohn) should be used cautiously in patients with histories of asthma or other significant allergies.



So is penicillin-resistant staph.

Lincocin (lincomycin hydrochloride, Upjohn) has been demonstrated to be effective in susceptible penicillinase-producing staphylococcal infections resistant to penicillin (including ampicillin). However, resistant staphylococcal strains have been recovered; resistance appears to occur in a slow stepwise manner. As with

all antibiotics, susceptibility studies should be performed.

Intramuscular and intravenous injections of Lincocin (lincomycin hydrochloride, Upjohn) are generally well tolerated. Instances of hypotension following parenteral administration have been reported, particularly after too rapid intravenous administration.

Sterile Solution (300 mg. per ml.)

Lincocin[®]

(lincomycin hydrochloride,
Upjohn)



Lincocin[®]

Sterile Solution (300 mg. per ml.)

(lincomycin hydrochloride, Upjohn)
for respiratory tract, skin, soft-tissue, and
bone infections due to susceptible
streptococci, pneumococci, and staphylococci

Each Lincomycin hydro-
preparation chloride monohydrate
contains: equivalent to
lincomycin base

250 mg. Pediatric Capsule 250 mg.
500 mg. Capsule 500 mg.
*Sterile Solution per 1 ml. 300 mg.
Syrup per 5 ml. 250 mg.

*Contains also: Benzyl Alcohol 9 mg.; and,
Water for Injection—q.s.

An antibiotic chemically distinct from others available, indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed.

CONTRAINDICATIONS: History of prior hypersensitivity to Lincocin (lincomycin hydrochloride). Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: Cases of severe and persistent diarrhea have been reported and at times drug discontinuance has been necessary. This diarrhea has been occasionally associated with blood and mucus and at times has resulted in acute colitis. This reaction usually has been associated with oral therapy, but occasionally has been reported following parenteral therapy. Although cross sensitivity to other antibiotics has not been demonstrated, make careful inquiry concerning previous allergies or sensitivities to drugs. Safety for use in pregnancy has not been established and Lincocin is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or

significant allergies. Overgrowth of non-susceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β -hemolytic streptococci infection for ten days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angio-neurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatment. *Skin and mucous membranes*—Skin rashes, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances.

Cardiovascular—Instances of hypotension following parenteral administration have been reported, particularly after too rapid I.V. administration. Rare instances of cardiopulmonary arrest have been reported after too rapid I.V. administration. If 4.0 grams or more administered I.V., dilute in 500 ml. of fluid and administer no faster than 100 ml. per hour. **Local reactions**—Excellent local tolerance demonstrated to intramuscularly administered Lincocin. Reports of pain following injection have been infrequent. Intravenous administration of Lincocin in 250 to 500 ml. of 5% glucose in distilled water or normal saline has produced no local irritation or phlebitis.

HOW SUPPLIED: 250 mg. and 500 mg. Capsules—bottles of 24 and 100.

Sterile Solution, 300 mg. per ml.—2 and 10 ml. vials and 2 ml. syringe.

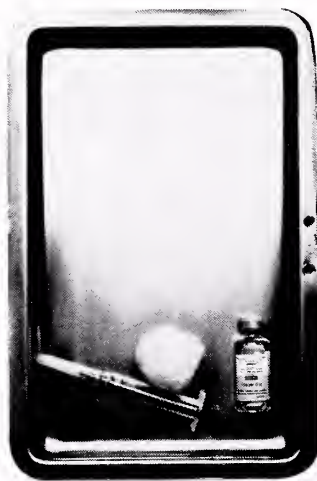
Syrup, 250 mg. per 5 ml.—60 ml. and pint bottles.

For additional product information, consult the package insert or see your Upjohn representative.

JA71-1203 MED B-5-SR (KZL-6)

The Upjohn Company
Kalamazoo
Michigan 49001

Upjohn



Special Report

Missouri Doctors and the Physician Assistant

WILLIAM STONEMAN III, M.D., St. Louis

Chairman, Ad Hoc Committee to Study Physician Assistants
MSMA Interspecialty Commission

A SUBSTANTIAL "MARKET" for physician assistants exists among Missouri physicians—both family practitioners and specialists. This is one of a number of significant findings revealed in the survey of Missouri State Medical Association members, developed and conducted by the Bi-State Regional Medical Program.

The purpose of this paper is to set forth the survey results in summary fashion and to suggest a few of the questions and tentative conclusions toward which the data might lead us. It is appropriate here to point out that the survey results represent physician opinion and are not, therefore, hard data. Nonetheless, they are trend indicators. Obviously, the questions and conclusions arising from the survey results must be taken into account in any planning which addresses itself to possible utilization of physician assistants to meet manpower shortages in the state and the region.

SURVEY BACKGROUND

The survey, conducted in May, 1970 and based on questions developed by a subcommittee of the MSMA Interspecialty Commission, was designed to determine whether a physician assistant market existed in the state and to elicit other relevant information, such as types of physician assistants most in demand and types of practice most likely to utilize such persons if and when they become available. The survey also sought opinions of responding physicians with respect to problems they might anticipate from utilization of physician assistants in their practice.

To avoid duplication of responses by physicians working in a common office, members were instructed to return only one survey form for each medical office, regardless of the number and working relationship among physicians in that office. Such responses are designated in the survey tabulation as "group" responses (as differentiated from "solo" responses from physicians in solo practice). "Group" responses represent a

A survey of members of the Missouri State Medical Association was conducted in May, 1970 to determine whether a market for physician assistants exists in Missouri and to gain additional relevant information. Doctor Stoneman summarizes the survey results and offers suggestions and conclusions in this report. Doctor Stoneman serves on the Interspecialty Commission as the representative of the Missouri Society of Plastic Surgeons. He is Program Coordinator of the Bi-State Regional Medical Program; Assistant Professor of Surgery and Assistant Professor of Community Medicine, St. Louis University School of Medicine; and Lecturer in Preventive Medicine at Washington University School of Medicine.

variety of physician relationships. However, the bulk of the survey's group responses (about 70%) represent true group practices in which office and practice are shared under partnership, incorporation or other arrangements with common management. In this survey, group responses accounted for 2,782 physicians. The average was nearly five per group. Solo practice responses accounted for 644 physicians.

It bears emphasizing here that the results of this survey represent information gathered mainly from physicians in private practice, either full-time or the greater portion of their time. Fewer than 10% of the responses came from those in full-time teaching or institutional practice.

SURVEY ORGANIZATION AND CONTENT

Key question asked was whether a physician assistant (p.a.), properly trained, might meet a need in the physician's solo or group practice not adequately met by nurses or other employees. About 45% of solo practitioners and 62% of group practitioners answered affirmatively. Further, 84%

of all affirmative responses indicated a willingness to hire one or more physician assistants were they available.

This potential demand for physician assistants appears to be more than 800, far more than can likely be trained in the foreseeable future in Missouri. The demand among group responses was about double that of solo practice responses.

Are there characteristics which predict the possible deployment of physician assistants in a free market? The computerized returns were utilized to interface an interest in hiring physician assistants with type of practice (solo or group) and numbers of nonphysician employees already working in a given solo or group practice. We have already referred to the higher percentage of group practices interested in physician assistants as compared to solo practices. In addition, results showed a close correlation between the percentage of "willing to hire" responses and the number of nonphysician employees already working for a given practice. This suggests that, in general, the more complex and organized practices are more prepared to utilize physician assistants.

Another factor examined in evaluating percentage of affirmative responses to interest in hiring p.a.'s was the practitioner's perception of his work load. In general, in both solo and group responses the practices working at or beyond capacity expressed a much greater interest in utilization of physician assistants than those working well below capacity. Differences did appear, however. Family practitioners working below full capacity expressed only marginal interest in p.a.'s. On the other hand, some specialties working below capacity expressed substantial interest.

Respondents were asked if utilization of a physician assistant would change the nature of the solo or group practice and, if so, in which of the following ways: increasing (1) the geographic coverage, (2) the number of hours the office would be open, (3) the kinds of procedures which could be carried out, (4) the age distribution of patients cared for or (5) places practice could be carried on. The changes most frequently anticipated by utilization of a physician assistant were an increase in number of hours the office could be open and an increase in kinds of procedures which could be carried out in the office. Among physicians indicating belief that a physician assistant would be of help, the most often expressed estimate of anticipated increased practice capacity was 15% to 30%.

In an effort to assess demand for physician as-

sistants in terms of community characteristics and geographic areas, the state of Missouri was arbitrarily divided into the following seven districts: St. Louis area, Kansas City area, Central Missouri, northeast, northwest, southeast and southwest. Apparently, the perceived need throughout the state is fairly even. The area returning the highest percentage of questionnaires reflecting p.a. need was the northeast with 61%. The lowest was St. Louis with 51%, a difference of only 10%.

Responses from communities of less than 2,000 were only 35% favorable, responses from communities with 2,000 to 400,000 persons were 55% to 60% favorable and those with more than 400,000 were 51% favorable.

It is important that, while the large metropolitan areas of Kansas City and St. Louis do not exceed their rural colleagues in percentage of questionnaires in favor of physician assistants, they do indicate a capacity and willingness to hire such allied health professionals which exceeds all the rest of the state by a ratio of approximately three to two.

This heavy potential demand in the metropolitan areas raises a serious question since it suggests that the physician assistant mechanism may not alleviate the present medical manpower maldistribution problem. Clearly, some incentive must be found to deploy the assistants into presently underserved areas if the physician assistant concept is to be effective in increasing the capacity to deliver health care in such areas.

Opinion of each practice as to the type of physician assistant sought was given by selection from a list of physician assistant types for which training programs are already in existence in this region or in other parts of the country. The greatest demand was for general physician assistants with other specialties ranking in the following order: surgical assistants, pediatric assistants, emergency assistants, ophthalmologic assistants, obstetrical assistants and anesthesia assistants.

For each of the above groups, the respondents were asked to indicate the level of salary they might anticipate such an assistant earning if employed by that practice. Projections varied over a wide range and no strong differences were noted. The bulk of responses fell within the range of \$6,000 to \$10,000 per annum. It is of interest that those favoring the hiring of physician assistants in the fields of general practice and internal medicine projected significantly higher salary ranges when the practice was located in a community of 2,000 to 100,000 popu-

lation than when the practice was located in a large city.

The responding physicians also were asked to make whatever comments they wished on the possible establishment of physician assistants as a new health manpower component in the state of Missouri. More than one third of the physicians returning questionnaires took the time to write comments. Generally favorable comments outnumbered generally unfavorable comments by a ratio of slightly less than three to one.

The following are some of the concerns most frequently expressed by respondents, whether favoring or not favoring training or employment of physician assistants to work under supervision of Missouri physicians.

The first was a concern with respect to the competence of nonphysicians to render services traditionally given by a physician, both in terms of quality of care and acceptability to patients. Closely allied to this was the concern over a precise definition of the physician assistant's role.

Considerable concern also was expressed over medico-legal implications, particularly with respect to malpractice liability that might be incurred by a physician utilizing a physician assistant in the treatment of his patients.

Another misgiving, somewhat less frequently expressed, was the belief that physician assistants in general might be desirable but were not applicable to the particular field in which the respondent worked.

SUMMARY

A survey of the opinions and attitudes of members of the Missouri State Medical Association with respect to the employment of physician assistants to work under the direct supervision of practicing physicians was carried out in the spring of 1970 by the Bi-State Regional Medical Program on behalf of the Missouri State Medical Association. Returns, accounting for the majority of the Association's membership, show the following:

1. There would appear to be a substantial "market" in Missouri among family practitioners and specialists for the employment of physician assistants, as represented in more than 800 "would hire" responses.
2. Willingness to utilize such personnel appears to be closely related to the extent to which the practice is working at or beyond capacity, most interested respondents feeling that the addition of such a person or

persons could increase capacity of the practice by 15%-30%.

3. Acceptance of and demand for physician assistants appear to be generally greater in more organizationally complex types of practice.
4. The categories of physician assistants in greatest demand are:
 - a. General physician assistant
 - b. Surgical assistant
 - c. Pediatric assistant
 - d. Emergency assistant
 There also is substantial demand for a variety of other specialty assistants, principally in the surgical specialties.
5. Concerns expressed by responding physicians have to do with:
 - a. Competence of nonphysicians to carry out tasks traditionally assigned to physicians and patient acceptance of nonphysicians in these roles.
 - b. Medico-legal problems revolving about the liability of a practicing physician in assuming responsibility for a physician assistant.

INTERPRETATIVE COMMENTS

If physician opinion accurately reflects the state of affairs in Missouri medical practice, some tentative conclusions can be drawn from study of the survey results, as follows:

1. Training programs in Missouri for physician assistants are justified by the demand.
2. Mechanisms for setting standards and for quality control of training programs must be defined.
3. Mechanisms for deployment of physician assistants to areas most in need must be developed.
4. Specific role definition for physician assistants varies widely. A decision must be made between two alternatives:
 - a. Attempting to fix the role and function of the p.a. legally (this probably involves separate licensure).
 - b. Placing him under the responsibility and authority of a licensed physician practitioner, who would then define his role and assume responsibility for his acts.
5. Prospective understanding with malpractice underwriters should be developed prior to large scale employment of physician assistants.

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1600 Broadway
Denver, Colorado 80202 (303) 893-9797

New Medical School Invites Private Physicians to Teach

The University of Missouri-Kansas City School of Medicine, in association with the Kansas City General Hospital and Medical Center, announces the availability of positions for physicians in private practice who are interested in a "sabbatical leave" teaching opportunity in the new Medical School.

The details are as follows:

1. Commitment by the physician must be for a minimum of three months, full time. Any attempt to cover one's practice evenings or weekends would make the experience unsatisfactory.

2. Duties would consist of demonstrating the best concepts of the practice of medicine, inpatient and outpatient, to medical students and house staff, in internal medicine or subspecialties of medicine.

3. The Docent Units of the new UMKC School of Medicine will provide the location for this experience.

4. Participation at all teaching conferences and participation from the viewpoint of private practice.

5. Title would be Lecturer in Medicine.

6. Responsibilities would involve five and one half days weekly, with no expectation of night call or weekend call.

7. There is a salary of \$2,000 per month, with no fringe benefits.

8. Initial correspondence should give adequate details of applicant's background and permission for us to contact possible references.

9. This position is open to any physician in the United States who can obtain the necessary temporary medical license in the State of Missouri.

10. First appointments will be effective September 1, 1971.

11. When possible, a *locum tenens* will be arranged by coordination with Residents in Medicine and their elective experience.

12. Applicants should write on their own letterhead and indicate for which of the following dates application is being made:

December 1, 1971

March 1, 1972

June 1, 1972

September 1, 1972

(et cetera)

13. If you are interested, please address your letter to: Office of the Provost for the Health Sciences, University of Missouri-Kansas City, 5100 Rockhill Rd., Kansas City, Mo. 64110.

Application of the Uniform Anatomical Gift Act in Missouri

THE CONCEPT OF TRANSPLANTATION is far from new. Rapaport and Dausset in their excellent book "Human Transplantation" point out that "Mention is made in Greek mythology of transplants from animals to man and early Christian legends and folktales of the middle ages tell of successful transplants of noses and even of whole limbs from one individual to another."¹

It remained until 1823 for the first clinical report of a successful skin transplant by Büniger² to appear in modern literature.

The great progress made in this century is well known. No doubt, kidney transplantation has led the field in the rapid strides made in the past ten years in organ transplantation.

With the advent of heart transplantation, it became apparent that the great morass of archaic laws formed a most formidable barrier for the individual who might wish to donate an organ, as well as to the medical people involved. To meet the medical needs for organs and tissue that currently exist as well as look to the increased need in the future, it was apparent that an appropriate and satisfactory legal reform was essential. Thus, in 1965, the National Conference of Commissioners on Uniform State Laws began a three-year study which culminated in the drafting of a model statute entitled the "Uniform Anatomical Gift Act," which received final approval of the Commissioners on July 30, 1968 and subsequently was approved by the American Bar Association and endorsed by the American Medical Association.³ It is appropriate to note that Mr. Richard J. Rabbit of St. Louis, Mo., served on the Committee acting for the National Conference of Commissioners on Uniform State Laws in preparing the Uniform Anatomical Gift Act.

This model law has been the guideline for enactment of Uniform Anatomical Gift Act legislation in 45 of the 50 states by August, 1970, and it is anticipated that it will be considered in legislatures in the five remaining states in the near future.

Prior to the Uniform Anatomical Gift Act,

it was stated that "when use of an organ or tissue after death of the donor is required, many questions arise as a result of several very important, but frequently competing interests that the law has endeavored to recognize: The need for organs, tissue and cadavers for medical education, research and therapy, including transplantation; the wishes of the deceased; the wishes of the surviving spouse and other appropriate next of kin; the need of society to determine the cause of death in certain circumstances."⁴

It is understandable then that the previously existing laws derived primarily of old common law, as well as numerous and varying state statutes governing autopsies, unclaimed bodies and medical examiners, were not designed to deal with the problem of tissue donation.⁴

Under English common law, the next of kin have traditionally had right to possession of the body for purposes of burial. The body was considered incapable of being owned, before or after death, and from the commercial sense could not be bought or sold. Therefore, an individual could not direct the disposition of his body during his lifetime.⁴

In the spring of 1969, the legislature of the state of Missouri passed Senate Bill #43 which was modeled after the Uniform Anatomical Gift Act.

Essentially, the Uniform Anatomical Gift Act grants authority to any individual of sound mind who is at least 18 years of age to give all or part of his body for any purposes specified in the Act with the gift to take effect upon declaration of death.

In addition, the Act provides that the next of kin may donate the entire body or parts thereof of the deceased and enumerates an order of priority of next of kin as follows:

- "1. The spouse.
- "2. An adult son or daughter.
- "3. Either parent.
- "4. An adult brother or sister.
- "5. A guardian of the person of the decedent at the time of his death.

The great progress made in transplantation in this century has been accompanied by a rapidly increasing need for donations of organs and tissue. To facilitate donations, 45 states have now enacted into a law a Uniform Anatomical Gift Act. The authors discuss features of the Missouri Anatomical Gift Act and present the Uniform Donor Card and a form to serve as a model for use by next of kin to make a donation. Doctor Allen is Associate Professor, Department of Community Health and Medical Practice and Doctor Head is Instructor, Department of Pathology, Section of Forensic Medicine at the University of Missouri Medical Center.

"6. Any other person authorized or under obligation to dispose of the body."⁵

It is important to point out that the Uniform Anatomical Gift Act provides that the donation by the deceased is paramount to the wishes of the next of kin. However, it provides that if the donee has actual notice of contrary indications by the decedent or that a gift by a member of a class is opposed by a member of the same or a prior class, the donee shall not accept the gift. Otherwise, the rights of the donee created by the gift are paramount to the rights of others.

The Act provides that the gift is effective immediately upon death without waiting for probate if a will is the instrument used to make a donation. The Act does provide protection from liability for physicians and others who act in accord with the statute and specifically states, "a person who acts without negligence and in good faith in accord with the terms of the Act or with the Anatomical Gift Laws of another state or a foreign country is not liable for damages in any civil action or subject to prosecution in any criminal proceeding for his act."⁵

The statute in the state of Missouri provides that the prospective donor may make his request of all or parts of his body by a will, a card or other document or an executed copy thereof. He may then deliver the document to the donee to expedite the appropriate procedures immediately after death. However, delivery is not necessary to the validity of the gift. The statute also provides that the donor may amend or revoke the gift by "one, the execution and delivery to the donee of a signed statement; or two,

an oral statement made in the presence of two persons and communicated to the donee; or three, a statement during a terminal illness or injury addressed to an attending physician and communicated to the donee; or four, a signed card of document found on his person or in his effects."⁵

There is the further provision that when any document of gift which has not been delivered to the donee, the donor may amend or revoke the gift by "destruction, cancellation, or mutilation of the document and all executed copies thereof."⁵

It is important to know that the law provides that "the donee may accept or reject the gift."⁵ When the gift is that of the entire body and if it be accepted by the donee, the donee "may, subject to the terms of the gift, authorize embalming and the use of the body in funeral services."⁵

When the gift is one of needed organs or parts, the part or parts are to be removed upon death of the donor "without unnecessary mutilation. After removal of the part, custody of the remainder of the body vests in the surviving spouse, next of kin, or other persons under obligation to dispose of the body."⁵

In more recent months, the problem of defining death has received considerable attention. Traditionally, the moment of death has been regarded as a question for medical determination and not the proper subject for codification by law. It was thus that the Commissioners chose to maintain this policy and unanimously concluded that it would be unwise to incorporate a definition of death into the Uniform Act.³ Indeed, there is considerable study under way by medical authorities in an effort to develop criteria for definition of death. The Missouri Statute in regard to death states, "The time of death shall be determined by a physician who attends the donor at his death, or if none, the physician who certifies death. The physician shall not participate directly or indirectly in the procedures for removing or transplanting a part, or be a relative within the fourth degree of consanguinity of any donee of a body or part thereof which is removed or transplanted."⁵

In keeping with the purposes of the Uniform Anatomical Act, it was appropriate to consider the development of a Uniform Donor Card that would be brief and yet allow the individual to make the donation of his desires. Being uniform, it would avoid confusion on the part of the public and the physicians regarding its

legality. Thus, on Nov. 7, 1969, a meeting was held by the Ad Hoc Committee on Medical Legal Problems, which reports to the National Academy of Sciences National Research Council Committee on Tissue Transplantation for the purpose of considering developing a Uniform Donor Card.^{6, 7}

Using as a starting point the recommended form prepared by the Commissioners on Uniform State Laws which appeared in the official commentary of the Uniform Anatomical Gift Act,³ representatives from practically every relevant medical and legal group that has been interested in transplantation eventually reached agreement on a Uniform Donor Card (Fig. 1).

Following the passage of Senate Bill #43 in the state of Missouri in 1969 and prior to the meeting held in Washington, D. C., a meeting was held in Columbia, Mo. on Dec. 8, 1969 to which representatives were invited from the State Anatomical Board, the three Medical Schools and the two Schools of Osteopathy, the Schools of Law, Missouri State Medical Association, Missouri Academy of General Practice, Missouri Association of Osteopathic Physicians and Surgeons, Missouri Bar Association, State Board of Embalmers and Funeral Directors, Missouri Division of Health, Missouri Division of Welfare, Missouri Division of Mental Health, Lions Club, Lion's Eye Banks and the Kidney Foundation. At this meeting, Mr. John Dixon, attorney from St. Louis, Mo., who serves as a member of the National Commissioners on Uniform Laws, gave an excellent presentation and review of the Uniform Anatomical Act. The group also discussed and came to agreement on a Uniform Donor Card with essentially the same wording as the one in Fig. 1.

The group also gave consideration to development of a form for use by Next of Kin and after considerable discussion agreed on a form (Fig. 2) which could serve as a model to be used by Next of Kin in making a donation.

For some organ transplants to be successful time is of essence. The designers of the Uniform Anatomical Act were fully aware of this and provided that the appropriate next of kin could authorize the donation before death actually occurred. Thus, the law states "the persons authorized by subsection 2 may make the donation after or immediately before death."⁵ Although "immediately" is not defined, it is interpreted to mean when it has been medically determined that death is imminent and inevita-

UNIFORM DONOR CARD

OF
 Print or Type Name of Donor

in the hope that I may help others, I hereby make this anatomical gift, if medically acceptable, to take effect upon my death. The words and marks below indicate my desires.

I give: (a)—any needed organs or parts
 (b)—only the following organs or parts

.....
 Specify the organ(s) or part(s)

for the purposes of transplantation, therapy, medical research or education;

 (c)—my body for anatomical study if needed.

Limitations or
 Special wishes, if any:

Signed by the donor and the following two witnesses in the presence of each other:

.....
 Signature of Donor Date of Birth of Donor

.....
 Date Signed City & State

.....
 Witness Witness

This is a legal document under the Uniform Anatomical Gift Act or similar laws.

Fig. 1

ble and, hence, the wording on the form shown in Fig. 2.

The hospital may choose to add an additional form which would substitute a foreword in the Authorization by Next of Kin Form (Fig. 2) for those instances for which authorization is obtained after death of the donor, as follows:

"I hereby make this anatomical gift of or from the body of
 who died on
 at the
 in subject to the following provisions indicated by initials in parentheses."

The simplest form of the Uniform Donor Card is a wallet size card in which the exact wording shown in Fig. 1 can be printed on the two sides of the card and in which the individual making a donation could appropriately fill out the card and sign it in the presence of two

ANATOMICAL GIFT BY NEXT OF KIN OR OTHER AUTHORIZED PERSON

I hereby make this anatomical gift of/ or from the body of

to take effect on his or her death subject to the following provisions indicated by initials in parentheses.

1. I am related to the above named in the following way:

- a. () the spouse
- b. () an adult son
- c. () a parent
- d. () an adult brother or sister
- e. () the guardian
- f. ()
authorized to dispose of the body.

2. I give:

- a. () the body
- b. () any needed organs or parts from the body
- c. () the following parts or organs from the body

3. To the following person or institution:

- a. () any individual person, tissue bank, or institution authorized by law to be a donee;
- b. () the following named donee:

4. For the following purpose(s)

- a. () any purpose authorized by law;
- b. () the following specified purpose(s):

Signed by the person authorized by law:

Time: Address:

Dated: City & State:

Zip Code:

.....
Witness' Signature

.....
Witness' Signature

Fig. 2 Form to be used by next of kin in making a donation.

witnesses and who also sign the card. The donor then carries the card in his billfold or on his person.

The same format may be used on a card in which all the wording in Fig. 1 is printed on one side of the card which is designed so that it can be folded over and be carried in the billfold. The reverse side of the card is thus available for use by organizations which might wish to distribute the card, such as the National Kidney Foundation, Lion's Eye Bank and others.

Some organizations wish to maintain a registry. This can be accomplished by attaching to the donation card a tear-off mail back card on which the donor may provide the information the registry desires to maintain. Certainly, the members of the State Anatomical Board have

indicated a strong desire to know in advance any individual who wishes to donate his entire body for anatomical study, as they wish to obtain additional information and in turn supply to the individual donor appropriate information.

Although the donor may specify a donee, since the population is quite mobile and in order to best carry out the intent of the donor and to facilitate the needs of transplantation, it seems preferable to encourage the donor not to specify a donee. The Uniform Donor Card appropriately filled out would be legal in any state which had passed the Uniform Anatomical Act, since the card need not be filed or recorded and further validation is not required. However, even though a donation has properly been made by the individual by filling out the Donor

Card, physicians usually will consider it prudent to contact the next of kin.

The Uniform Act facilitates this in that it provides that consent may be obtained by telegraphic, recorded telephonic or other recorded message or by any written document. Despite the importance of considering the wishes of next of kin, it is essential to understand that under the Uniform Act, the wishes of the individual take legal precedence over those of next of kin. It is further important to point out that if the physician has obtained consent from the individual prior to death or the individual has a donor card appropriately filled out and the physician is unable to reach the next of kin, he may proceed with immunity from criminal liability, or criminal prosecution.

From various sources, it is evident that public interest in donation is quite high. Uniform Donor Cards and explanatory material may be obtained from the following organization:^{6, 8}

Eye Bank Association of America
111 Tulane Ave.
New Orleans, La. 70112

Falkner Foundation, Inc.
66 West 87th St.
New York, N. Y. 10024

Living Bank
6631 South Main
P. O. Box 6725
Houston, Tex. 77005

Medic Alert
Turlock, Calif. 95380

National Kidney Foundation
315 Park Ave. South
New York, N. Y. 10010

National Pituitary Agency
Suite 503-7
210 West Fayette St.
Baltimore, Md. 21201

Tissue Bank
U. S. Naval Medical School
National Naval Center
Bethesda, Md. 20014

United Health Foundations, Inc.
Transplantation Information Center
150 Fifth Ave.
New York, N. Y. 10011

As earlier pointed out, the American Medical Association had endorsed the model Uniform Anatomical Gift Act. Inserted in the Nov. 9, 1970 issue of the *Journal of the American Medical Association* was a sheet of Uniform Donor Cards. Additional cards may be obtained on request to:⁹

American Medical Association
535 North Dearborn St.
Chicago, Ill. 60610

The Department of Health Education of the American Medical Association currently is preparing a pamphlet designed to provide the prospective donor with appropriate information so that his decision will be an informed one. Both physicians and attorneys should become familiar with the Uniform Anatomical Act,⁶ as their advice is asked often by those who desire to learn the proper way to make a donation.

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Notes of interest from Here

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U. S. Secretary of Labor James D. Hodgson has announced that **Dr. Richard A. Sutter**, St. Louis, has been named to the National Advisory Committee on Occupational Safety and Health. Doctor Sutter is recognized nationally for his work in industrial medicine. The Committee advises, consults with and makes recommendations to the Secretary of Labor and the Secretary of Health, Education and Welfare on matters relating to the administration of the Williams-Steiger Act of 1970. For the past nine years, Doctor Sutter has served on the Council of Occupational Health of the American Medical Association. He is a member of the Governor's Council on Occupational Health and Safety Task Force—1971.

Dr. Gritte Supattansiri has established his practice as a surgeon in Ironton. A native of Thailand, Doctor Supattansiri interned for one year at the West Suburban Hospital in Oak Park, Ill. In 1966-1967, he was a surgical resident at the Michael Reese Medical Center in Chicago. Since that time, he has been chief resident surgeon at the Columbus Cuneo Medical Center in Chicago. His arrival in the Arcadia Valley is the direct result of several years' effort by **Drs. Marvin Menne, Robert Dettmer and Robert Harland** to find a qualified physician and surgeon needed in that community.

Dr. F. L. Harms, Salisbury, was recognized recently in the *Salisbury Press-Spectator* for completing 40 years of practice in that community. In addition to his large medical practice, which he still maintains, Doctor Harms has been active in civic affairs throughout the years. His son, **James Harms** of Nevada, is chief surgeon at the Nevada Clinic; his son-in-law, **Dr. John Rapiejko**, is beginning his residency in anesthesiology at the University of Arkansas Medical Center and his daughter, **Mrs. John (Janet) Rapiejko**, is a medical technologist at the University of Arkansas Medical Center.

Dr. Frederick D. Peterson, Richmond Heights, has been elected president of the St. Louis Children's Hospital Medical Staff Society. Other newly-elected officers are **Dr. J. Neal Middlekamp**, vice-president and president-elect, and **Dr. Gerald Wool**, secretary-treasurer.

Dr. James E. Vester, who has been in private practice in Bismarck, has joined the staff of the Marshall State School and Hospital as its sixth full-time physician. —The Medical Arts Clinic in Farmington has announced that **Dr. Abraham Aronson**, Clayton, will have office hours at the Clinic for the practice of psychiatry. Doctor Aronson is a clinical instructor at the St. Louis University School of Medicine.

Dr. Minot P. Fryer, associate surgeon at Barnes Hospital in St. Louis since 1967, has received an honorary doctor of science degree from Brown University at Providence, R. I. An alumnus of the school, Doctor Fryer is the author of more than 100 articles related to plastic surgery and two books.



WASHINGTON

AMA Cites Positive Legislation Record

The American Medical Association set forth its recent record on legislation—a record that shows statements in support of health care proposals in 31 of 35 appearances in the 91st Congress and support in the present Congress for medical school expansion, increased financial aid to medical students, family practice training programs and full funding for maternal and child care programs.

"It requires a certain strain on the process on human logic to interpret this record as negative," the AMA stated.

The AMA's record on legislation was submitted as part of a 39-page statement filed by the organization with the Subcommittee on Administrative Practice and Procedure of the Senate Judiciary Committee. Subcommittee Chairman Sen. Edward M. Kennedy (D-Mass.) had charged the AMA with maintaining a negative and obstructionist attitude toward proposals to improve health care in the United States during a hearing by the subcommittee on July 14.

Bills supported by the AMA in the 91st Congress included appropriations for hospital and medical facilities construction, appropriations for medical education, drug abuse education and narcotic addict rehabilitation, vaccination assistance programs and regional medical programs.

The AMA opposed as unnecessary the proposed Commission on Marihuana; opposed one version of the Occupational Safety and Health Act of 1969 but supported another version in both the Senate and House; and opposed certain parts of the Social Security Amendments of 1970 while supporting other parts of the bill.

This affirmative legislative stance has been maintained in the present Congress, as many members of the Senate and House from both sides of the aisle will attest, the AMA noted.

The AMA, in its statement, pointed out that it has introduced its own proposal for financing health care—Medicredit—which would provide government subsidized health insurance to the poor and insure against catastrophic medical costs.

"Medicredit is designed to end for all Americans the burden of expense and to make all Americans truly equal in their access to all types of medical care," the AMA said.

The organization warned against the "panacea" approach of a massive government health program as recommended by Kennedy.

"We have learned that lesson in welfare and poverty," the AMA said, "Must we learn it anew with health care?"

Regarding specific charges leveled against the organization and doctors generally by Kennedy, the AMA statement termed them "out of date, out of context and out of balance."

"And his conclusion, that doctors act primarily for gain, is outrageous," the AMA report stated.

Contrary to Kennedy's charges, the AMA noted, it does not and has not opposed vaccination programs, group practice, an increase in the number of doctors, private health insurance, government support for medical education, innovations in medical school curricula, equal opportunity in medical education or peer review.

The AMA cited its public record and policy statements over the years to refute these charges in detail.

The AMA did object to Medicare at the time of its passage because it believed available government funds should not be used to provide assistance to those who did not need it and because of the unsound actuarial basis on which it was predicated. Premiums have since had to be raised several times to support the program, the AMA noted.

After Medicare became law, both the AMA and doctors generally gave it full support and worked to make the program a success, the statement added.

In further response to other testimony before the subcommittee on the same date, the AMA denied that it was responsible for "major weakening" of the proposals offered in 1964 by the Heart Disease, Cancer and Stroke Commission, which called for 60 regional clinical and care complexes.

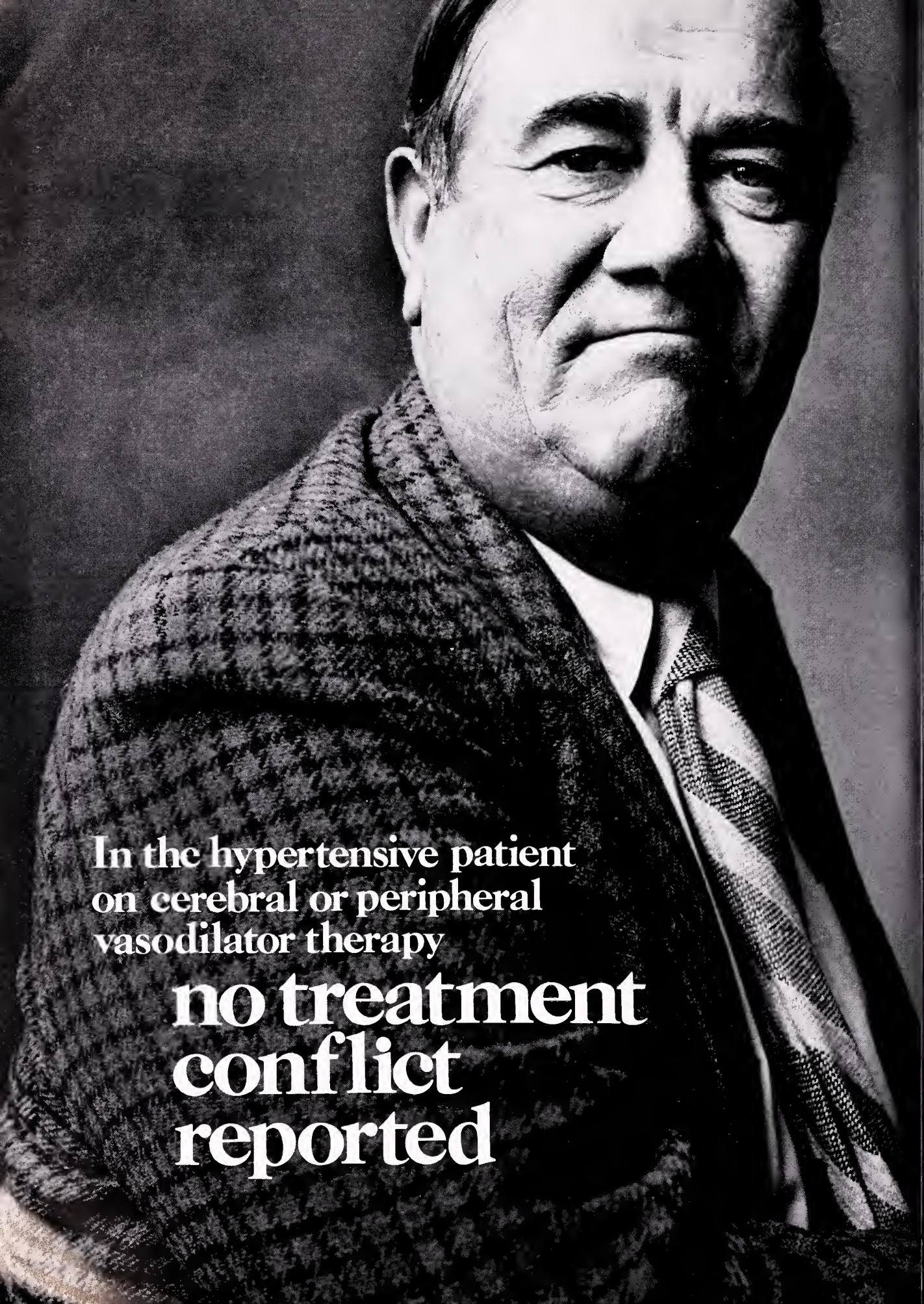
Citing the record once again, the AMA pointed out that the legislation was hastily drawn and was submitted to Congress without sufficient supporting data. This fact was recognized and alluded to by Kennedy himself at the time, the AMA noted.

Two of the commission's own subcommittees had serious reservations about the legislation, the AMA stated, and it was only after AMA officials worked in close cooperation with Johnson Administration officials that the bill was salvaged with an emphasis on pilot projects to test the theories and concepts advanced by the commission.

The AMA completed its statement:

"Let us set aside old, worn-out charges. Let us set aside emotional language and political opportunism. Let us, instead, seek together valid and workable solutions to the health care problems that confront us.

"The AMA will support every such effort."



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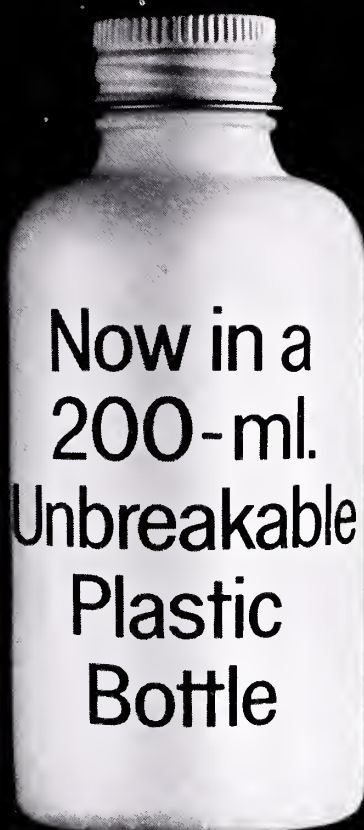
- has not been reported to complicate the treatment of hypertension.
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Although not all clinicians agree on the value of vasodilators in vascular disease, several investigators¹⁻⁴ have reported favorably on the effects of isoxsuprine. Effects have been demonstrated both by objective measurement^{2,4} and observation of clinical improvement.^{1,3}

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B. F. WOOLDRIDGE, M.D. and V. E. JEANS, M.D., *Joplin*

Choledochal Cyst

Case Reports

CYSTS OF THE BILIARY DUCTAL SYSTEM are uncommonly encountered in surgical practice. Our recent encounter with two separate cases has prompted this review.

The first reported authenticated case was that of Douglas¹ in 1852. Tsardakas and Robnett² reviewed 242 cases reported in the world literature by 1956, and Alonso-Lej reported 419 cases by 1959.³ Since then, sporadic reports of individual cases have appeared in the literature.⁴⁻⁶ The total number of cases reported probably is not an entirely reliable exponent of the incidence of the disease. The majority of the reported cases have been found in adults under 30 years of age and a preponderance has been reported by Japanese authors.^{7, 8}

Cystic enlargement of the common bile duct is referred to in the literature as choledochal cyst, choledochocoele, diverticulum of the duct and megalocholedochus. Four groups have been used in their pathological classification. Group I is a cystic dilatation of the common bile duct. Anatomically, the intrahepatic biliary tree is normal, the biliary tree above the cystic dilatation is somewhat dilated and the terminal common duct usually narrowed. This is by far the most common variety described. Group II is a congenital diverticulum of the common bile duct. Group III is a choledochocoele. Only the intraduodenal portion of the common duct is affected. Group IV is multiple cystic dilatation of the intrahepatic and extrahepatic ducts^{3, 9-11} (Fig. 1).

Most authors favor a congenital origin of all groups. The theory presupposes a congenital weakness of the bile duct wall. In group I, this is combined with an obstructive factor of the distal duct which may be congenital or acquired. Distal obstruction has been attributed to the sphincter of Oddi, valves, stenosis or neuromuscular incoordination.¹²

The cysts of groups I and II may vary in size from that of a walnut to a mass larger than a full term pregnancy. The cyst wall usually is thickened with loss of the histologic picture of the common bile duct. The wall is actually a thick fibrous sac usually lacking an epithelial lining, and the wall usually shows microscopic evidence of extensive inflammatory reaction. The cyst contains bile, the character of which, no doubt, depends on the amount of obstruction present and the concentrating power of the gallbladder. Associated pathologic changes in the liver are not uniformly characteristic and depend on the degree of biliary obstruction.

This review of choledochal cysts, which are uncommon, was prompted by a recent encounter with two separate cases. The authors present case reports of the patients, who were 21 and 15 years old, and discuss and illustrate problems in diagnosis and management. The authors are from the Departments of Surgery at Freeman Hospital and St. John's Hospital.

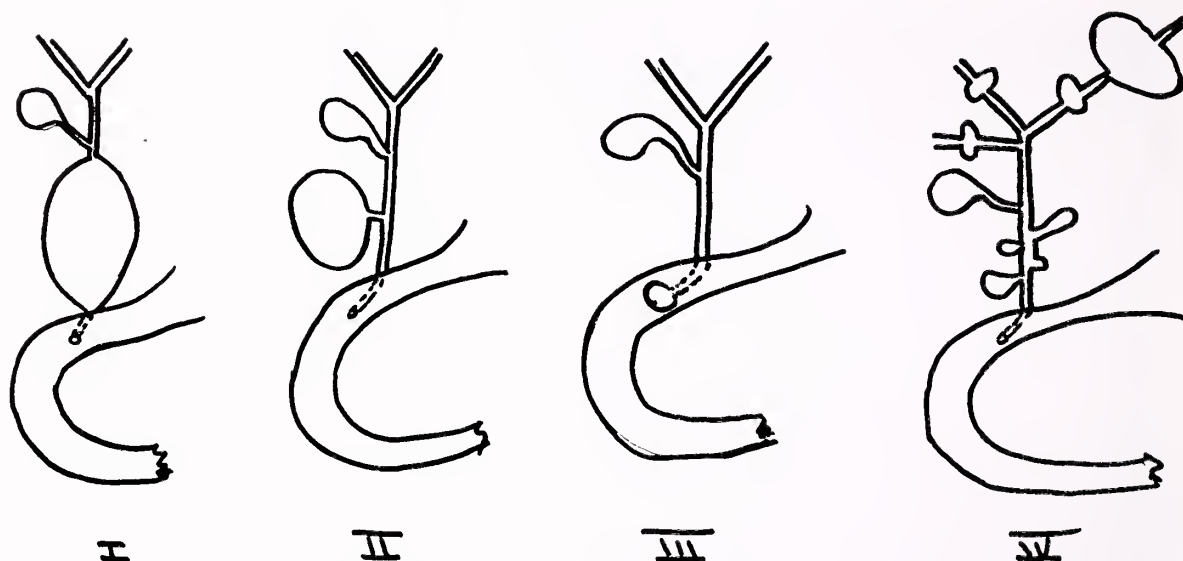


Fig. 1 Classification of choledochal cysts modified from Alonso *et al.*³

Frequently, the liver is enlarged. Cirrhosis and cholangitis are common and associated pancreatitis has been reported.¹⁰ Stone formation as well as carcinoma in the cyst have been described.^{9, 13}

The classical triad of signs and symptoms associated with the choledochal cyst is abdominal pain, a right upper abdominal quadrant mass and jaundice and is present in about 60% of cases.¹⁴ Eighty percent of cases become symptomatic before the age of 30 years and after six months of age. Cases have been described in a stillborn foetus at one extreme and in a 62-year-old person at the other.¹³

In 70% of cases, jaundice will develop at some time during the course of the disease. It may be slight, intermittent or long standing and may be due to extrahepatic obstruction and/or hepatocellular damage.

Preoperative diagnosis has been reportedly low and in various reviews has been from 13% to 30%.^{2, 3, 15} Roentgenological studies may be helpful in making a diagnosis. A flat plate of the abdomen may reveal a rounded soft tissue mass in the right upper quadrant. An upper gastrointestinal (GI) series may reveal a radiolucent mass displacing the duodenum and the stomach. Although the right kidney usually is not displaced, compression of the right ureter by the cyst may produce a hydroureter or hydronephrosis. Barium enema study may produce displacement of the hepatic flexure inferiorly by the cyst.

Oral cholecystography seldom visualizes the cyst or gallbladder. Intravenous cholecystogram may visualize the cyst because its success is not

dependent on the cyst's or the gallbladder's ability to concentrate the dye.

The patient with choledochal cyst of groups I, II and III requires surgical treatment. Excision of the cyst in Group I carries a high mortality^{2, 3} and treatment of choice would seem to be either cystoduodenostomy or cystojejunostomy.¹⁶ The anastomosis should be to the most dependent part of the cyst to assure satisfactory drainage of the bile. Reflux ascending cholangitis appears to be a problem only when an obstructive element remains in the biliary tree.^{17, 18} The disposition of the gallbladder at the time of operation for choledochal cyst has not received much attention in the literature. Daniel⁴ and others¹⁹ have recommended its removal since they believe that it becomes infected later.

In Group II (congenital diverticulum of the common bile duct), removal of the diverticulum is unquestionably the treatment of choice. Because of the position of the diverticulum, the continuity of the biliary tree is not interrupted. In Group III (choledochocoele), incision of the cyst allows normal passage of bile into the duodenum. Excision of the cyst returns the anatomy of the biliary tree to normal.²⁰ Group IV or multiple cystic dilatations of both intraphepatic and extrahepatic ducts are probably not amenable to surgery.

CASE REPORTS

Case # 1. A 21-year-old white man was admitted to St. John's Hospital for investigation of recurring episodes of epigastric and right hypochondriac painful distress. As a child, he had been

seen by physicians many times for complaints of upper abdominal pain of transient duration. At times, nausea, vomiting and low-grade fever accompanied the pain, but he gave no history of jaundice, hematemesis, melena or recent weight fluctuation. He admitted some flatulence but was unaware of food dyscrasias.

Physical examination revealed complaints of tenderness in the right upper abdominal area, but there was no detectable mass and no fever or clinical jaundice. Hemogram and SMA 12 were within normal limits. Chest x-ray was normal except for congenital variation of the right third rib. Gall bladder x-rays revealed concentration of media to be below average and no stones were detected. Intravenous cholangiogram revealed a large collection of contrast media over the right upper abdomen, apparently superimposed on the common duct (Fig. 2). A pyelogram also was noted in these films. Dr. C. C. Young, radiologist, interpreted these films as being representative of a choledochal cyst.

Laparotomy revealed a thickened gall bladder which contained no stones. The entire common bile duct below the cystic duct entrance was transformed



Fig. 3 Case #1. Photomicrograph of biopsy of cyst wall.

into a large bile-filled choledochal cyst the size of a grapefruit. The gall bladder was resected and the dependent portion of the cyst wall biopsied and anastomosed to a defunctionalized loop of jejunum Roux en Y. Histologically, the gall bladder showed cholesterosis and the cyst biopsy showed a fibrous wall partially lined by low cuboidal epithelium (Fig. 3). The postoperative course was uneventful. A two-month postoperative intravenous cholangiogram showed the cyst size to be large, but with good drainage into the intestinal tract (Fig. 4). Follow-up has revealed no further history of abdominal pain two years after operation.

Case # 2. A 15-year-old white girl entered St. John's Hospital on April 1, 1967 with a history of having "stomach trouble" for years. Recently, she had had two acute episodes with severe upper abdominal pain and tenderness. Repeated GB series had failed to visualize the gall bladder and no stones were seen. There was no history of jaundice or clay-colored stools. Her admitting diagnosis was chronic cholecystitis and cholelithiasis.

On this basis, the abdomen was explored on April 4, 1967. A large cystic mass was found in the lesser peritoneal cavity, extending from the pylorus to the hilum of the liver. Aspiration revealed dark bile. More detailed examination revealed a 4 cm x 8 cm enlargement of the common duct, which extended from the duodenum proximally to the cystic duct. The cystic duct, common hepatic duct and right and left hepatic ducts were dilated. An operative cholangiogram (Fig. 5) visualized the cyst and proximal ducts, but did not visualize the distal common duct. A careful search for distal drainage was unsuccessful. The cyst was anastomosed to the jejunum by a Roux en Y type of procedure. The gall bladder was not removed.

The postoperative course was uneventful and, at the present time, the patient is well and healthy with no complaints.



Fig. 2 Case #1. IV cholangiogram revealing large choledochal cyst.



Fig. 4 Case #1. IV cholangiogram at two months after operation showing large size cyst, but with good drainage.

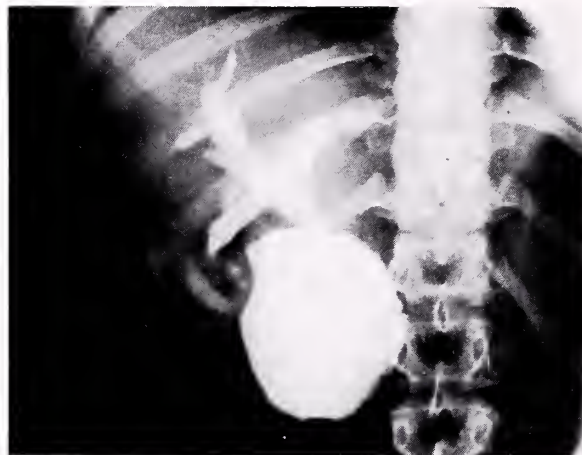


Fig. 5 Case #2. Operative cholangiogram revealing large choledochal cyst.

SUMMARY

Choledochal cysts are infrequently encountered in surgical practice. They are of congenital origin and usually become clinically manifest before the age of 30 years. The classical triad of jaundice, abdominal mass and pain is found in about 60% of reported cases. Internal drainage procedures, such as choledochocystoduodenostomy or choledochocystojejunostomy, seem to be the most appropriate surgical procedures. Case reports of two patients, aged 21 and 15 years, are presented and illustrate problems in diagnosis and management.

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Gonococcal Infections in Prepubertal Children

THE INCIDENCE of gonococcal infection in the adolescent and adult has increased rapidly in the past five years.¹ In the literature, there is mention of the disease in the preadolescent child, but it is only of a limited nature.²⁻⁴ This report reviews the diagnosis, symptoms, course of illness and treatment of genital infections in this population. Problems in management also are discussed.

Data were collected retrospectively by a search of patient records with positive smear or culture or both for *Neisseria gonorrhea*. Fifty-three cases, 15 boys and 38 girls, were seen at The Children's Mercy Hospital from 1963 through 1970. Thirty-one girls and five boys were less than ten years of age and are the subject of this report.

Gram stained smears were performed on fresh secretions taken with sterile swabs. The cultures, obtained in the same manner, were inoculated on chocolate agar or Thayer Martin media and incubated in a CO₂ environment. All isolates were confirmed by sugar fermentation. Fluorescent technique was not employed. Twenty-four girls and four boys had confirmatory cultures and smears. A variety of conditions accounted for the eight cases in which the culture and smear were not correlative. One boy and one girl had no smear done. Another boy had the culture improperly incubated. Two girls had no culture obtained and one was improperly plated. No explanation for the disparity was found in the other two instances.

Without exception, all children presented with a vaginal or penile discharge. The type of secretions varied greatly. Some girls had only a moderate amount of mucoid discharge with little odor while others had frankly purulent, foul smelling secretions. The urethral secretions in four of the boys were grossly purulent, but in one boy, thin and watery.

Dysuria was the second most common symptom but occurred only in two boys and eight girls. Significant swelling of the glans penis was present in three of the five males, in one to the point of urethral plugging. Although many of the girls had moderate irritation and erythema of the vulva, none had infected Bartholin's

glands. Urinary frequency, pruritus and vaginal bleeding were less common and inconsistent findings. A foreign body was not found in any of the patients.

Temperature elevation greater than 101 F occurred in one boy and six girls. One boy and a girl had concurrent respiratory illnesses. Another girl was incubating rubeola. Four girls had fever associated with complications of their primary genital infection. Three of these patients had abdominal findings compatible with peritonitis,⁵ and the other had probable septic arthritis. Fever was not a significant finding in those children who had uncomplicated disease.

A history of definite sexual exposure was obtained in three girls and suspected in three others. Four young girls were allegedly injured by falling on sharp objects or in some unknown manner. None of the boys had a history of sexual exposure or injury. There were numerous cases in which other members of a family had symptoms compatible with gonorrhea, but no further information was available. Two young siblings in each of two separate families had proven genital infections.

The course of the illness was difficult to evaluate. Patients were not followed on a daily basis and many did not keep return appointments. There also was a lack of documentation in the records. Frequently the duration of the symptoms was unknown. In the girls, a discharge was commonly present for two to three days; dysuria was present usually less than two days. A penile

Although prepubescent children with genital gonorrhea are uncommon, the symptoms of these infections in children are not remarkably different from those in the adult. The authors emphasize that the physician must be aware of their possibility so that adequate diagnostic and treatment measures, as explained, can be performed. Doctor Burry is Assistant Professor of Pediatrics, University of Missouri School of Medicine-Kansas City and Mr. Thurn is from the Children's Mercy Hospital.

discharge, especially if the glans penis was swollen, caused concern in the first 24 hours. On the other hand, several girls had symptoms for more than one month before medical attention was considered. The symptoms often were of an intermittent nature and treatment was sought only after they became persistent.

A treatment program was not standardized, but penicillin in various regimens was usually prescribed. Daily procaine penicillin for several days was the most common treatment administered. Some physicians gave a few days of intramuscular procaine penicillin followed by oral penicillin. An occasional child was treated with oral ampicillin. With a few exceptions, patients were asymptomatic within one week. The discharge was gone, dysuria had ceased and genital irritation was no longer present. In those patients who received daily injections of procaine penicillin, the discharge was essentially gone at 72 hours. In the three children who were hospitalized with fever and abdominal pain, the symptoms were markedly improved in 12 to 24 hours. All patients eventually became asymptomatic while receiving penicillin, but several required repeat courses of therapy because of suspected reinfection. Sensitivity tests were not performed on all isolates and those who were difficult to cure may have harbored resistant organisms.

DISCUSSION

The symptoms of gonococcal infections in children are not remarkably different from those in the adult. In the female, they are quite similar to symptoms produced by foreign bodies, bubble bath irritation and other microorganisms.⁶⁻⁸ Once *Neisseria gonorrhea* is considered in the etiology, a diagnosis should not be difficult to prove. Although the Gram stain smear can be misleading, proper culture technique and sugar fermentation should confirm the diagnosis in most cases. In our experience, if they are properly performed, the gram stain and culture are correlative in more than 90% of the situations. The necessity for proper sampling, rapid handling, adequate media and appropriate culture incubation cannot be overemphasized.

The most significant problem apparent from this review was a lack of adequate follow-up. Perhaps the fact that many different physicians participated in the care of the clinic patient can account for some of the confusion. Repeat cultures were obtained on only 13 of the 36 patients. Although every child had cessation of

symptoms, cure was not definitely proven in the majority of cases. Serology for syphilis also was infrequently performed. An initial serology was done on only eight patients. Only two patients had a serology performed more than one month from the time of the initial infection. These faults cannot be condoned. They point out the inexperience of many physicians when dealing with venereal disease in children.

Penicillin remains the drug of choice for the treatment of gonorrhea. There is no question that organism resistance is occurring but for most patients, penicillin is still quite effective.⁹ Ampicillin has received some attention in adult females but has not been widely used.¹⁰ For the child who is allergic to penicillin, oral tetracycline or erythromycin can be prescribed. Several treatment programs are available, but authorities agree that repository penicillin assures the best chance of cure.^{11, 12} It is interesting that no definite therapeutic recommendations for young children are available from the United States Public Health Service. Our experience would indicate that daily injections of 600,000 units of procaine penicillin for five days produces clinical cure in the majority of cases. A better program of follow-up would provide the necessary information on bacteriologic cure rate.

SUMMARY

Prepubescent children with genital gonorrhea are uncommon but not rare. A young age is not always a deterrent in contracting the illness. The history may not be reliable and physical examination of the patient also is of limited value. The physician must be aware of the possibility so that adequate diagnostic and treatment measures can be performed.

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Viral Aseptic Meningitis: 12 Years' Experience

ASEPTIC MENINGITIS is a clinical syndrome characterized by a rapid onset of symptoms with fever, headache and signs of meningeal irritation. Enteroviruses frequently are incriminated^{1, 2} although other causes also may be responsible.³ With viral aseptic meningitis, the clinical course is usually brief and recovery often is complete within two weeks.⁴ Cerebrospinal fluid (CSF) examination reveals mild pleocytosis, frequently predominantly lymphocytic with minimal sugar and protein abnormalities. By definition, in aseptic meningitis, no bacteria are isolated from CSF cultures. The clinician is frequently required to distinguish this relatively benign illness from other more serious cases of meningitis. In such cases, epidemiologic data often can be of help.

This paper presents data from an enterovirus surveillance study initiated following an outbreak of Coxsackievirus in Kansas City in 1956.⁵ Specimens referred by local physicians were cultured for viral agents, and the clinical data were correlated with the isolations obtained. Pertinent clues to the clinical diagnosis of aseptic meningitis secondary to enterovirus infections are presented and the differential diagnosis discussed.

METHODS

Patients included in this surveillance study developed symptoms compatible with aseptic meningitis between January, 1957 and December, 1969. Primary medical care was rendered by physicians in the Kansas City area, and specimens were sent to the Center for Disease Control (formerly National Communicable Disease Center) for virus isolation attempts. Most patients were hospitalized and represented sporadic cases. Paralytic poliomyelitis cases and group cases assembled from epidemic investigations were excluded from the tabulations. A serum specimen, throat swab, stool and CSF were sought from each patient as well as a detailed history.

Material from throat swabs was eluted in tryptose phosphate broth treated with penicillin, streptomycin and amphotericin and inoculated into tissue cultures. A 10% stool specimen suspension in distilled water was prepared, and an

aliquot treated with antibiotics, as noted above, and inoculated into tissue cultures. CSF was inoculated directly into the tissue cultures. Primary monkey kidney cells were utilized for isolation throughout the study period and supplemented by human embryonic fibroblast (Wistar strain) and HEP-2 cell lines from 1965 through 1969. All specimens were carried through one blind passage before they were considered negative. Presence of virus in the cultures was indicated by cytopathic effect or by hemadsorption with guinea pig red blood cells. Identification of the isolate was made by neutralization with specific antisera.

RESULTS

Three hundred and five cases were available for tabulation for the years 1957 through 1969. Specimens from 29% of the patients yielded a viral isolate. Seventy-nine percent of the patients noted onset of their symptoms in the months of July, August and September (Fig. 1). The majority of virus isolations also were obtained in this interval with 38% of specimens submitted in August yielding a virus. No isola-

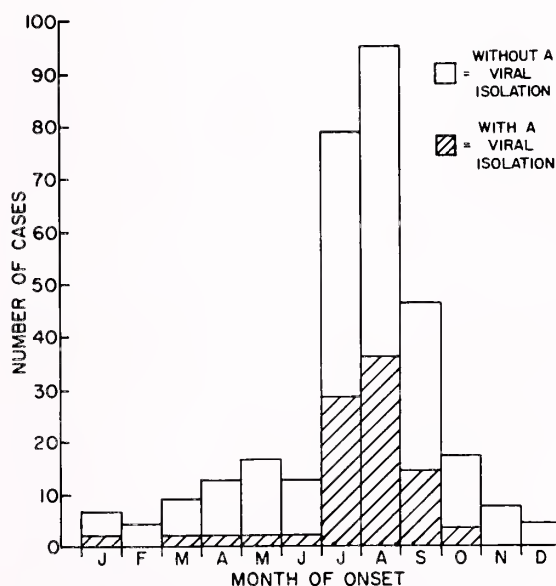


Fig. 1 Month of symptom onset for 305 aseptic meningitis patients, 1957-1969.

Three hundred and five cases of aseptic meningitis referred to the Kansas City Laboratories of the Center for Disease Control for viral diagnosis were reviewed. The majority occurred in July, August and September among children and young adults, and Coxsackie and Echoviruses were the most frequent isolates. Pertinent clues to the clinical diagnosis of aseptic meningitis secondary to enterovirus infections are presented and the differential diagnosis discussed. The authors are from the Ecological Investigations Program, Center for Disease Control, Health Services and Mental Health Administration, Public Health Service, U. S. Department of Health, Education and Welfare. Doctor Chin is Director of the Program.

tions were found in November, December and February. In January, March, April, May and June, only one isolation per month was made. Age analysis revealed a fairly constant number of aseptic meningitis cases in patients between the ages of 0 and 9 years with a steady decline following that decade. Only an occasional case occurred in persons 60 years of age and older (Fig. 2).

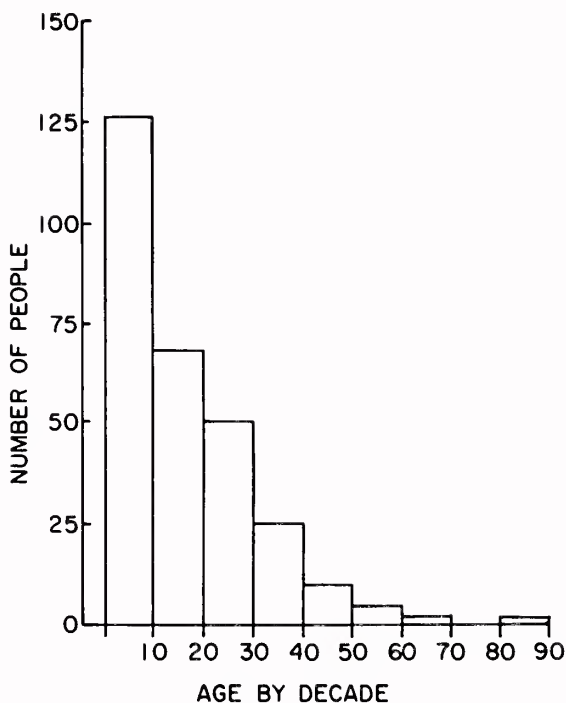


Fig. 2 Age distribution of 305 aseptic meningitis patients.

One hundred and sixty patients had a history adequate for tabulation of symptoms. As expected, since these symptoms were the cause of referral, the majority complained of fever, stiff neck and headache. Of particular note was the fact that more than half the people suffered gastrointestinal illness symptoms preceding or during the meningitis symptoms (Table 1). Upper respiratory symptoms were less frequent, occurring in 24%. Rashes accompanying meningitis symptoms were relatively uncommon at 9%.

TABLE 1
SYMPTOMS OF 160 ASEPTIC MENINGITIS PATIENTS

Symptom	Cases	
	NUMBER	%
Fever	148	93
Stiff neck	122	76
Headache	109	68
Nausea and vomiting	82	51
Upper respiratory illness	39	24
Rash	15	9
Diarrhea	14	9

Initially, poliovirus was the most frequent isolate among nonparalytic aseptic meningitis patients. Poliovirus was not isolated after 1959, and Coxsackie and Echoviruses dominated during the remainder of the study. Other viruses isolated included mumps, herpes simplex and adenovirus (Table 2). Several untypable enteroviruses also were found. Among the Coxsackie and Echovirus isolates, no definite pattern of occurrence of serotypes could be identified. Specific serotypes would be isolated in one year, would not be isolated for several years and then would reappear. In five years, several serotypes were isolated at different times.

Twenty-six percent of 274 stool specimens, 15% of 170 throat washing specimens and 12% of 121 CSF specimens yielded a viral isolate. Viruses were isolated from stool samples obtained as late as 21 days after the onset of symptoms. Throat samples yielded viral isolations up to seven days following onset of symptoms, as did CSF samples. Stool samples obtained more than 21 days after the onset of symptoms and throat swabs or CSF samples obtained seven days or more after the onset of symptoms consistently failed to yield a virus when cultured.

CSF cell counts varied from below five cells per cubic mm to more than 5,000 cells per cubic mm (Table 3). More than 1,000 cells per cubic mm were not uncommon. Polymorphonuclear

TABLE 2
VIRAL ISOLATIONS BY YEAR FROM ASEPTIC MENINGITIS PATIENTS, 1957-1969

<i>Virus</i>	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	<i>Total Cases</i>
Polio														
Type 1		1	15											16
Type 3		1												1
Coxsackie														
A9			1			1			1	6				9
B2							1							1
B3	2					1	1						1	5
B4									1				1	2
B5	2	2									1		1	6
Echo														
Type 4			1					1		1			3	6
Type 6		1									1			2
Type 9	1	3							4				3	11
Type 30												4	2	6
Mumps				1						1				2
Herpes simplex									1					1
Adenovirus													1	1
Untyped virus		1	2		4	3	1	1	4		1		1	18
Total	5	9	19	1	4	4	3	3	11	8	3	4	13	87

leukocytes predominated in the CSF early in the illness, with a shift to lymphocytes occurring later. If CSF samples were obtained five days or more after the onset of symptoms, lymphocytes occupied more than half the cell count in 88% of the patients (Fig. 3). All cases with paired acute and convalescent CSF specimens showed an increase in the percent of lymphocytes between the first and second specimens. In cases

where an actual viral isolation was obtained from the CSF indicating the specimen was obtained early in the illness, 64% had a predominance of polymorphonuclear leukocytes.

CSF sugar levels were usually in the 40 mg/100 ml to 80 mg/100 ml range, though five cases below 40 mg/100 ml were recorded (Fig. 4). The majority of patients exhibited a CSF protein over 40 mg/100 ml (Fig. 5); values exceeded 100 mg/100 ml in ten cases. The classic CSF findings of normal sugar and protein levels with lymphocytes as the predominant cell will be found more frequently if the tap is delayed until four or five days after the onset of symptoms.

TABLE 3
CEREBROSPINAL FLUID CELL COUNT ON 221
ASEPTIC MENINGITIS PATIENTS

<i>Cell Count</i>	<i>Number of Patients</i>
0—5	9
6—49	32
50—99	31
100—199	38
200—299	36
300—399	19
400—499	10
500—1000	29
1000+	17

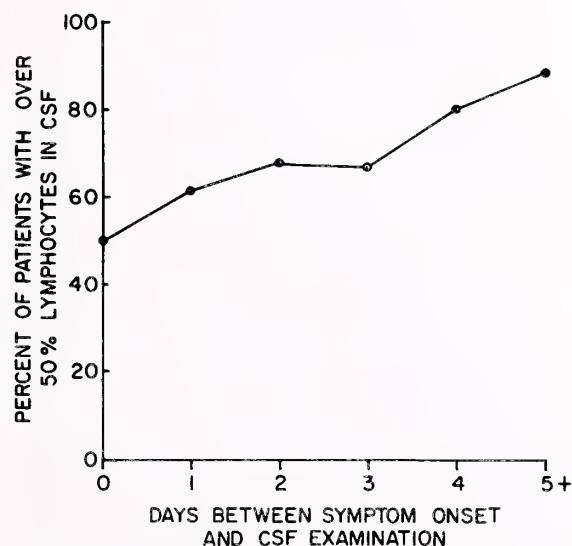


Fig. 3 Percent of aseptic meningitis patients with lymphocytes as the predominant cell in the cerebrospinal fluid.

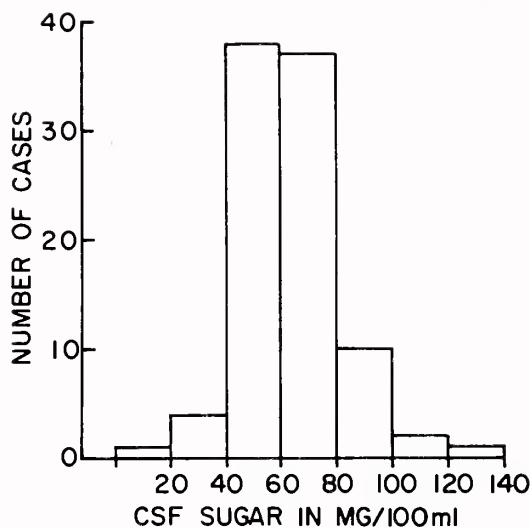


Fig. 4 Cerebrospinal fluid sugar concentration in 93 aseptic meningitis patients.

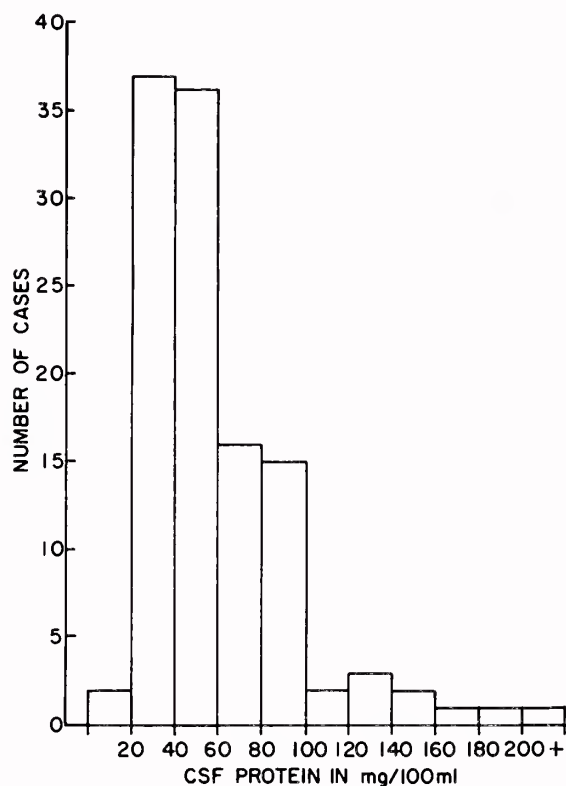


Fig. 5 Cerebrospinal fluid protein in 116 aseptic meningitis patients.

DISCUSSION

Observations in this group of patients should not be extended to the general population because of the method of referral. Mild aseptic meningitis cases undoubtedly occur frequently

and never are seen by physicians. Many who consult physicians are not referred to our laboratory for diagnostic studies. Only cases severe enough to require CSF analysis and viral culture come to our attention. Nevertheless, the frequent isolation of enteroviruses from such cases in this laboratory closely parallels the findings of other studies.^{1, 3}

The month of onset of meningitis symptoms correlates well with the period of enterovirus prominence in the summer months.² Thus, the frequent isolation of Echo and Coxsackieviruses, is no surprise. The prominence of gastrointestinal symptoms of nausea, vomiting and diarrhea corroborates the impression that enteroviruses can lead to aseptic meningitis. The disappearance of poliovirus isolations indicates the success of recent vaccination programs. It also has allowed identification of other enteroviruses previously grouped with polio, which are known now to be additional causes of aseptic meningitis. The prominence of symptoms of meningitis in the young and the frequency of virus isolation from this group may be explained by their lack of previous experience with enteroviruses. By adulthood, most patients have experienced infection with one or several of these viruses and have developed antibody protection.

A patient presenting with a history and physical findings of meningitis must be carefully evaluated for bacterial and parasitic etiologies before viral aseptic meningitis is diagnosed. Leptospirosis, syphilis, tuberculosis or adjacent suppurative processes must be excluded. Unusual causes of meningitis such as toxoplasmosis, schistosomiasis, trichinosis, cryptococcosis, amoebiasis and histoplasmosis must be considered as well. The presence of encephalitic symptoms such as disorientation, stupor, personality changes and memory loss should lead to consideration of arthropod-borne viruses, such as Eastern equine, Western equine, St. Louis and California encephalitis.

In many of the above illnesses, a laboratory diagnosis may require several weeks. Epidemiologic data and knowledge of other similar cases in the community can assist the clinician in arriving at a tentative diagnosis. Aseptic meningitis due to an enterovirus should be strongly considered if symptoms are mild, have an abrupt onset, begin during or following a gastrointestinal illness, are not associated with encephalitic symptoms and abate without therapy in 14 days, usually without sequelae. The probability of viral aseptic meningitis is strengthened if the patient is young and symptoms occur in the sum-

mer or fall. High CSF counts with predominantly polymorphonuclear leukocytes and abnormal protein or sugar levels may occasionally be encountered as shown in this study and others.² With appropriate caution, viral aseptic meningitis still is an excellent possibility since it can mimic the CSF findings of the more serious bacterial meningitides.

Role of the Viral Diagnostic Laboratory

The viral diagnostic laboratory can assist in the diagnosis of individual patients, though results may not be available for several weeks. Although individual patients may not benefit directly, there is community value in continuous monitoring of diseases present. Knowledge of viruses currently prevalent allows design of control measures to preserve the public health. In epidemic situations, an early viral diagnosis obtained from one or two patients can direct control measures for the entire community, thereby contributing substantially to the overall health.

As knowledge of viruses increases and techniques for quickly and accurately identifying such viruses improve, we can expect that a greater role in clinical medicine will be played by the viral diagnostic laboratory. Until then, studies such as presented here and others offer a background of experience to interpret individual cases as they present to the clinician.

SUMMARY

Enteroviruses were isolated from 28% of spec-

imens from 305 aseptic meningitis cases referred for viral studies to the Kansas City Laboratories of the Center for Disease Control. Aseptic meningitis was found most frequently in the summer and most often in children below the age of nine years. Fever, stiff neck and headache associated with gastrointestinal illness were the most frequent symptoms. Early specimen collection and proper handling are imperative for accurate virus identification. With the decline of poliovirus, the majority of isolations since 1959 were Coxsackieviruses and Echoviruses. CSF cell counts, proteins and sugars were shown to have a wide range of values in aseptic meningitis, sometimes approximating those of the more serious bacterial meningitides.

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Dr. Richard S. Wilbur, new Assistant Defense Secretary for Health and Environment, has proposed that the military services pay physicians substantially more to avoid a severe shortage of medical skills when the services switch to an all-volunteer basis in mid-1973.

Doctor Wilbur told the Senate Armed Services Committee that the health and environmental problems of the defense department cannot be entirely separated from those of the civilian population. Among the major problems facing him in his new post are filling the armed services' needs for physicians, drug addiction in the services and whether there should be a military medical school.

He told Pentagon newsmen that he opposes establishment of such a school at this time because it would not begin producing enough doctors to be worthwhile for many years. He predicted that the military will have "a severe health care shortage when the draft is gone" unless something is done about it.

Doctor Wilbur said the need is to induce doctors with eight or ten years' service to stay in the military. At present, these men leave in large numbers and the services are forced to draft young doctors whom Wilbur described as "ineffective" because they lack experience.

Doctor Wilbur said to retain experienced doctors and yet convince Congress to go along with an added bonus scheme, the military might do with fewer doctors. Under this plan, he said, the actual budget for doctors' pay would remain unchanged but the funds would be spread among fewer men.

Special X-ray Exhibit

SIDNEY RUBIN, M.D., RODGER LAMBIE, M.D., EDWIN HERMAN and
ROBERT PENKAVA, M.D., *Kansas City*

Radiologic Problem Case

A 74-YEAR-OLD WHITE MAN was admitted to the hospital for evaluation of a palpable tender mass located in the right upper abdominal region. This mass was detected on a routine physical examination.

Past History: The patient had a transurethral resection of the prostate in 1945 and a left inguinal herniorrhaphy in 1968.

Physical Examination: The blood pressure was 150/80; pulse rate, 80 beats per minute. A mass the size of a grapefruit was elicited on deep palpation in the right upper quadrant. There was slight tenderness associated with the mass that appeared to descend on deep inspiration and strongly suggested the renal origin.

Laboratory Data: Laboratory studies disclosed the following values: Hemoglobin, 15.3 gm/100 cc; hematocrit, 46%; white blood cell count (WBC) 9,700 with 63% polys, 1% stab, 1% eosinophil and 35% lymphocytes; platelets were normal; urinalysis, pH 6, with specific gravity, 1.021 and sugar, protein, WBC and RBC all negative. Serum electrolytes were normal. Calcium value was 9.4 mg/100 cc; phosphorus, 3.1 mg/100 cc; and BUN 19 mg/100 cc. Alkaline phosphatase level was 87 Mu/ml; LDH, 150 Mu/ml and SGOT, 32 Mu/ml (all within normal limits).

Differential Diagnosis:

1. Cyst.
2. Neoplasm.

X-ray Findings: A flat plate of the abdomen revealed a large mass which appeared ill-defined, but was continuous with the renal outline (Fig. 1). The lower pole of the kidney was enlarged. The borders were obscured by gas



Fig. 1 Flat plate of abdomen reveals large mass in the lower pole of the right kidney. This observation does not define pathology. Differential is between cyst and neoplasm.

and fecal material. A ring-shaped shadow was seen to lie above the kidney and suggested a single large gallstone.

An intravenous pyelogram was performed with a nephrogram. The mass was better outlined and was smooth, thus favoring a cystic tumor.

An isotopic renal flow study and scan was performed, but was equivocal as to the nature of the lesion. No deposition of Technetium was evident in the mass. The study did not assist in the differential.

A selective renal arteriogram was done (Fig. 2) and the tumor was avascular, suggesting a cyst.¹ There were no abnormal tumor vessels

This is the sixth in a series of articles presenting unusual radiologic problem cases. The authors are from the Department of Radiology, Menorah Medical Center, where Doctor Rubin is Chairman and Doctor Penkava is a Resident in Radiology. They were assisted by Hal Marshall, M.D., Pathologist.



Fig. 2 Selective renal angiogram failed to demonstrate abnormal vascularity. In slightly delayed film phase, the smooth delineation between normal parenchyma and lower tumefaction is evident. Findings favor cyst. Calcified ring lateral to kidney represents a gallstone.

demonstrated on the early sequence studies. The delay film again depicts the well-defined, smooth outline of the tumor.

The final study (Fig. 3) was to attempt aspiration of what was now considered to be a cyst.² The needle was inserted into the tumefaction under the TV monitor viewing. The mass proved to be solid. Aspiration of some cells confirmed a carcinomatous histology.

DISCUSSION

Various roentgenographic modalities have been applied to the diagnosis of renal masses. The scout film only rarely establishes a definitive diagnosis. Calcification can be seen in inflammatory disease and is not pathognomonic of carcinoma. Shell-like calcification has been found in renal cysts more often than has carcinoma.

Excretory urography and retrograde pyelography may show smooth alterations of the pyelocalyceal structure permitting a conclusion of renal mass, but not of the pathological nature of the mass. Nephrotomography has been considered highly reliable in assessing the actual nature of the lesion. In a large series, this has proven to be approximately 44% accurate. At the best, the nephrotomogram can only suggest the possibility of a tumor if there is an ill-defined margin observed about the tumor.

Radionuclides for static or kinetic flow scans have been no more reliable than nephrotomograms in evaluating the vascularity or hypovascularity of a lesion.

In most instances, the renal arteriogram is



Fig. 3 Film depicts mass with needle inserted into what proved to be a solid tumor. Definitive diagnosis of carcinoma suggested.

the most reliable diagnostic modality for differentiating renal neoplasms from benign cysts.³ Arteriography preceded by an injection of adrenalin hydrochloride and selective renal arteriography may make the correct diagnosis in about 90% of the cases.

Finally, cyst puncture, aspiration, contrast study of the cyst and histochemical, as well as histopathological, analysis of the cyst containing fluid is the most accurate mode of examination. In varied series, this technique was 98% accurate.

Fat has *not* been found in a benign lesion. Fat globules within a cystic mass are indicative of a necrotic neoplasm.

It should be self-evident that all these studies may be required to avoid the unnecessary operative intervention in the surgically high-risk patient.

Erich Lang¹ has emphasized the diagnostic accuracy in the combination of intravenous pyelography, selective renal arteriography and cyst puncture for the assessment of avascular lesions of the kidney.

(Continued on page 703)

Cognitive Dissonance and the Smoking Behavior of Researchers on Smoking

DISSONANCE THEORY¹ has often been applied as an explanatory model for explaining why people continue to smoke or quit when they are confronted by the knowledge that smoking is a health hazard. "A person's knowledge of the facts on smoking and lung cancer and his awareness that he, himself, smokes represent inconsistent cognitions which may lead him to give up smoking, deny the validity of the facts on smoking and cancer . . . etc."¹⁻³

Logically, smokers with the greatest volume of information concerning the hazards of smoking should experience more "cognitive dissonance" than their less informed counterparts. If dissonance, in fact, creates a "psychological tension"¹⁻⁴ which is capable of provoking a person to change his behavior or attitudes, then one would suspect that individuals familiar with empirical evidence relevant to the health hazards of smoking would behave and feel differently about smoking than do other people. That is, persons knowledgeable about smoking would be expected to most likely be nonsmokers and espouse antismoking views.

Historically, physicians and other medical personnel have been particularly concerned with health problems associated with smoking. Studies of physicians' smoking behavior⁵⁻⁶ have shown that doctors successfully quit smoking nearly three times as often as people in the general population. In this case, dissonance theory

might easily explain the high quit rate. Physicians as a group, however, are not only very different socioeconomically than the rest of the population, but also have diverse interests of which health issues related to smoking are only a small part; their interest in smoking-related problems may be minimal. The present investigation, therefore, is concerned with the application of a dissonance model in describing the relationships between smoking behavior and other attributes of a professional group especially interested in the problems of smoking, i.e., researchers recently engaged in investigations of smoking-related problems.

METHOD

A 12-item, one-page questionnaire was mailed to the 339 researchers in the United States who were listed in the 1968 *Directory of On-Going Research in Smoking and Health*,⁷ a publication of the National Clearinghouse for Smoking and Health. This directory was selected because it is the only comprehensive listing (known to the author) of names and addresses of persons recently involved in research relevant to smoking.

The questionnaire included items concerning the investigator's professional activities, education and smoking history and his behavior and attitude toward smoking. The questionnaires, with stamped return envelopes, were mailed on Dec. 1, 1969. Returns which provided the data for this analysis were received until Jan. 26, 1970. No follow-up questionnaires or postcards were sent as the respondents were anonymous.

RESULTS

One hundred and eighty-four or 54% of the questionnaires were returned during an eight-week period.

One hundred and sixty-eight respondents were men and 16 were women. Ages of respondents ranged from 27 to 76 years, with the greatest percentage (37.9%) falling into the 50- to 76-age bracket. Respondents were distributed over the country as follows: 44.5% from those states

This is a report on a survey of the 339 researchers in the United States who are involved in research relevant to smoking. Results show a close association between their smoking habits and those of M.D.s. The investigation endorses the expansion of anti-smoking campaigns and suggests areas in need of more refined analysis. Mr. Lebedun is a Psychiatric Social Worker at the Mid-Missouri Mental Health Center and Doctor Donovan is from the Sociology Department of the University of Missouri.

east of the Mississippi River; 32.2% from mid-western states; 23.3% from states west of a north-south line which includes the western border of Colorado and New Mexico. Of the total sample, 82 had at least an M.D. degree. The remaining 102 respondents had at least a B.A. or B.S. degree in fields including psychology, chemistry, education, sociology and statistics. Most respondents indicated having more than one college degree.

Because of the high educational level of this group of professionals, the investigators in the present study assumed that the smoking habits of this group would be different from those of the general population.⁸ This expectation is in accord with other studies indicating that, especially for men, "The greater his income and the greater his years of education, the less likely he is to be a smoker."⁸ In fact, a significant difference ($X^2 = 13.815$, $df = 2$, $P < .001$) was observed. The extent of this difference with respect to the categories of "Never Smoked," "Formerly Smoked" and "Smoke Now" are presented in Table 1.

TABLE 1

A COMPARISON OF CHARACTERISTICS OF
SMOKERS IN THE GENERAL POPULATION
WITH STUDY SAMPLE

	General (Male & Female) Population*	Researchers on Smoking (N = 184)
Never Smoked	44.8%	64 = 34.8%
Formerly Smoked	13.2%	65 = 35.3%
Smoke Now	42.0%	55 = 29.9%

$X^2 = 13.815$, $P < .001$ (significant difference).

* From: National Center for Health Statistics. Civilian, non-institutional population, 1965.

According to this table, there is at least a 10% difference, by each of the three categories, between the general population and researchers concerned with smoking (subsequently referred to as "researchers on smoking"). Interestingly, researchers on smoking quit smoking almost three times as often as people in the general population (35.3% "quitters" compared to 13.2% "quitters").

Since a large percentage of the individuals involved in Smoking Research are physicians, it was expected that the sample in the present study would endorse questionnaire items relevant to smoking similarly to other national studies involving M.D.'s only. This was observed to

an extreme degree in that the present study's sample differed no more than .9% in any of the three previously mentioned categories when compared to the statistics reported by NORC and Chilton Research Services.¹ Table 2 presents results provided by three independent research organizations polling practicing M.D.'s and the current investigation concerning the categories of "Never Smoked," "Formerly Smoked," etc. Table 2 shows a close association not likely to occur by chance ($X^2 = 13.815$, $df = 2$, $P < .001$) between the smoking habits of M.D.'s and respondents in the present sample.

TABLE 2

COMPARISON OF NATIONAL SAMPLES OF M.D.'S
SMOKING BEHAVIOR AND SMOKING BEHAVIOR
OF RESEARCHERS ON SMOKING

Survey by	Never Smoked %	Formerly Smoked %	Smoke Now %
National Opinion			
Research Center	34.6	35.9	29.6
Chilton Research			
Services	34.0	36.2	29.6
American Academy of General Practice	39.0	40.0	21.0
Survey of Researchers on Smoking	34.8	35.3	29.9

However, a subgroup in the study sample, "Treaters," did behave significantly different ($X^2 = 10.60$, $df = 2$, $P < .005$) from other respondents. It was found that of the 43 researchers who were involved in treating clients to help them quit smoking, only 18.7% appear in the "Smoke Now" category. Nearly half of the "Treaters" have never smoked and approximately one third have smoked and quit. Table 3 presents a comparison of the smoking habits of respondents who treat or do not treat clients to help them quit smoking.

TABLE 3

RELATIONSHIP BETWEEN TREATING SMOKERS
AND RESEARCHER'S OWN SMOKING BEHAVIOR

	"Treaters" (N = 43)		"Non-Treaters" (N = 141)	
	NUMBER	%	NUMBER	%
Never Smoked	21	48.8	43	30.4
Formerly Smoked	14	32.5	51	36.1
Smoke Now	8	18.7	47	33.5

$X^2 = 10.60$, $P < .055$ (significant difference).

TABLE 4
EFFECT OF DOING SMOKING RESEARCH ON
INVESTIGATOR'S OWN SMOKING BEHAVIOR

	Smoke Now (55)	Formerly Smoked (65)	(N = 120) Total
Quit	0	18 = 27.7%	18 = 15.0%
Decrease	15 = 27.2%	4 = 6.1%	19 = 15.9%
None	40 = 72.8%	43 = 66.2%	82 = 69.1%
Total	55 = 100%	65 = 100%	120 = 100%

Many respondents indicated that doing smoking research has brought about some change in their own smoking behavior. Thirty and nine tenths percent of the 120 respondents who "Smoke Now" or "Formerly Smoked" attributed their quitting or reduction in rate of smoking to being involved in smoking research. Ninety and six tenths percent of the 64 respondents who "Never Smoked" indicated that doing smoking research had no influence on their behavior, while 9.4% reported that it caused them to be "more opposed" to smoking. Table 4 presents the effects of doing smoking research on the investigator's own smoking behavior for respondents who either "Smoke Now" or "Formerly Smoked."

A majority (63.4%) of the respondents reported that doing smoking research influenced their attitudes and behavior toward smokers. Of this majority, most investigators directed efforts toward convincing and aiding smokers to quit. Table 5 shows the effect of doing smoking research on the attitude and behavior of the investigator toward smokers.

TABLE 5
EFFECT OF DOING SMOKING RESEARCH ON
ATTITUDE AND BEHAVIOR TOWARD SMOKERS

	(N = 184)	%
1. Try to convince and aid smokers to quit	81	44
2. Behave negatively toward smokers	18	9.7
3. Feel sorry or angry at smokers	18	9.7
4. None	67	36.6

INTERPRETATION

A number of propositions are suggested by the preceding data. From Table 1, it is obvious that individuals engaged in smoking research are less likely to "Smoke Now" and more likely to be former smokers than are individuals in the

general population. Dissonance created in smokers who are conducting smoking research, however, cannot be considered a major determinant of this difference because of the coincident high educational and presumed high economic status of our sample.

Data presented in Tables 2 and 4 provide some control for the confounding variables mentioned above. Once again, it appears that doing smoking research per se is not effective in reducing the frequency of smokers in a given population. Since the proportion of former smokers, present smokers, etc. is similar for national samples of M.D.'s and respondents in the present study, it might be surmised that level of "education" in general, and in particular very extensive knowledge relevant to the hazards of smoking, are of limited value in sufficiently motivating people to quit smoking. This finding is consistent with notions supported by Brehm and Cohen⁹ stating that people do not necessarily avoid dissonance provoking information. Perhaps, in the case of the researcher who smokes, cognitions inconsistent with his behavior serve to make him a more objective investigator. The dissonance created in this case, then, would be functional to goal attainment.

A most remarkable finding in the present study concerns the degree of difference between the categories of "treaters" and "nontreaters" as shown in Table 3. The fact that only 18.7% of the "treaters" currently smoke possibly relates to the increased involvement with the smoking problem that might be necessitated when the researcher elects to help others give up smoking. The treater may feel a special need to set an example for others and personally maintain some internal consistency.¹⁻³

At the same time, however, the present findings indicate that "treaters," as a group, are more likely to have never smoked than nontreaters and, in fact, they quit smoking at a slightly lesser rate than do "nontreaters." Being a smoker may predispose the investigator to avoid becoming a "treater" since "one of the basic postulates of the (dissonance) theory is that a person will actively attempt to avoid situations and information that would increase dissonance."⁹

It appears that researchers interested in smoking-related problems are most affected by their work in their approach to other smokers. Findings presented in Table 5 indicate that most respondents would at least make smokers around them uncomfortable, if not actually attempt to persuade the smoker to quit. For the respondents who smoke, persuading or aiding their as-

sociates to quit may serve a dissonance reducing function in that at least some of their behaviors would be consistent with their cognitions about smoking. This finding provides rationale for increasing national antismoking ads which educate the public to the deleterious effects of smoking. The authors suggest that while these ads may not directly affect the avid smoker, they apparently work to create a social environment which is hostile to smoking. If the number of dissonant bits of information determines the magnitude of dissonance,⁴ then an environment hostile to smoking should create greater dissonance in smokers and be likely to bring about a reduction in smoking (or cause the smoker to seek a new, less hostile environment).

CONCLUSIONS

The present study is limited in the degree to which findings may be generalized for at least the following reasons:

1. Investigators listed in the *Directory of On-Going Research* have been subject to the selection procedures of that publication. Reports on research are submitted voluntarily by the authors rather than being solicited by the publication.
2. The investigators who did not return questionnaires may disproportionately represent those researchers who smoke. This is likely based on the assumption that investigators who smoke might be embarrassed or at least sensitive about their behavior to the extent that responding to a questionnaire on smoking would create further discomfort for them as they would be announcing their inconsistent behavior to the world.

The present study, in its partial description of the smoking behavior of investigators concerned with smoking-related problems, has considerable value to the extent that it is able to stimulate further work with selected, highly spe-

cialized samples of persons expressing intensive interest in smoking-related problems. Factors that enable this group to successfully quit smoking more often than people in the general population deserve further study. Involvement in health education is shown to be positively related to increased frequencies of quitting. Existence of intercolleague social pressure to quit smoking is suggested by the present findings and may significantly influence quit rates for the study sample.

The present investigation endorses the expansion of antismoking campaigns, as the dissonance created by knowledge about the hazards of smoking does appear to at least indirectly affect the frequency of smokers in a given population. Finally, dissonance theory seems to inconsistently account for the findings presented. Obviously, a more refined analysis, relating perhaps to the *amounts* smoked by respondents, is needed.

Acknowledgement: The authors express appreciation to Dr. Donald Granberg of the University of Missouri for his critique of an earlier version of this paper.

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Radiologic Problem Case

(Continued from page 699)

Pathological Diagnosis: The central portion of the right kidney reveals extensive necrosis. The peripheral portion contained viable malignant neoplasm arranged in papillary glandular configuration.

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Recent Developments in the Treatment of Infectious Diseases

Part IV. Modification of Antibiotic Regimens in Renal Failure

TO ACHIEVE the desired effects, a drug must be present in adequate concentrations at the appropriate sites of action within the body. This is a function of the steady state concentration of the drug in the plasma as shown in Fig. 1. Plasma concentration is, in turn, a manifestation of the rate and extent of the absorption of the drug, its distribution, its binding in various tissues, its metabolism within the body and, finally,

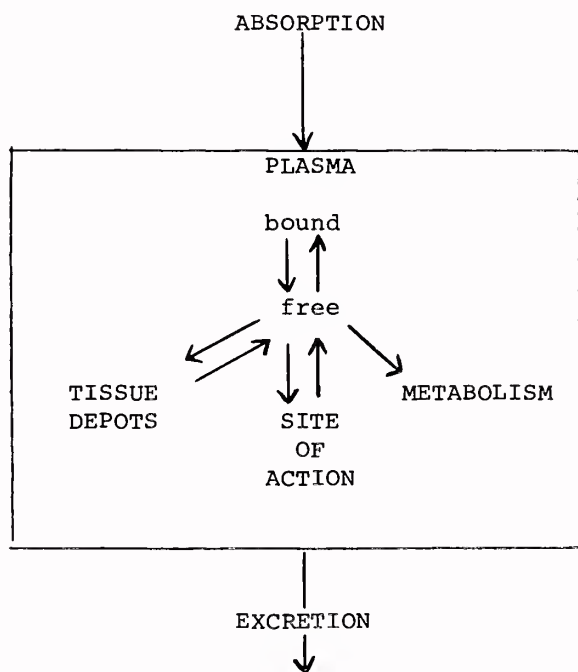


Fig. 1

its excretion. Although the absorption of any drug plays some role in its duration of action, the length of time during which a drug exerts its effects is largely determined by its rate of inactivation and excretion. Redistribution of drugs to other tissues and accumulation in storage depots may be of some importance, particularly with the nonionized or lipid-soluble drugs. The time course of the drug's effect, including

the time of maximum effect, is determined by the balance among all of these factors.

For purposes of this discussion, we will assume a steady-state concentration of the drug in the plasma and define excretion of the drug as the rate-limiting step. Although this approach may lack the appeal of the highly controlled pharmacological experiment, it nonetheless has direct clinical application and has been shown to be more than adequate under many and diverse circumstances. Since the major extrarenal site of drug excretion and inactivation is the liver, uremic patients with liver disease or jaundice will require markedly reduced dosages of all drugs and measurement of the concentration in the serum may be necessary. An even greater reduction in dosage may be necessary in patients who are in shock or who are likely to have diminished renal and hepatic blood flow. This discussion assumes normal or near normal hepatic and circulatory function. Although data regarding the alteration of antibiotic dosage in patients undergoing hemodialysis or peritoneal dialysis are incomplete, guidelines have been included since there are now increasing numbers of these individuals in the community undergoing dialysis.

The serum creatinine determination probably is the most important test of renal function and is less misleading than the blood urea nitrogen value. In this paper, modifications of dosage will be based on the creatinine clearance. Once a baseline creatine clearance has been obtained, alterations in glomerular filtration rate can be determined simply by measuring the serum creatinine and comparing it with the level obtained at the time of the clearance study. For example, if the creatine clearance is 50% of normal when an individual's creatinine is 2 mg/100 cc, a subsequent serum creatinine value of 4 mg/100 cc would mean that the creatinine clearance had fallen to about 25% of normal. Thus, frequent

determinations of the creatinine clearance are not necessary in order to use the tables. However, frequent measurements of serum creatinine will be necessary in the management of some patients and determinations of the creatinine clearance should be made at these times.

The logarithm of the serum concentration of a drug is linear when plotted as a function of time, and the slope is a constant for a normal individual. Thus, the half-life ($T_{1/2}$) of an antibiotic, the time required for the serum concentration to decrease by 50%, may be easily determined. When the renal function of a patient decreases, the slope of this line will change and the $T_{1/2}$ will be increased. To maintain a given concentration of an antibiotic in the serum for a prolonged period of time, one may either decrease the dosage or use the same dose and lengthen the intervals between doses. The latter approach will be used in this discussion. In persons with varying degrees of renal impairment, the dose intervals should be based on the observed half-life of the drug. For example, if the half-life of a drug is two hours normally and the half-life in the presence of renal failure is four hours, then the dose interval should be doubled. The tables in this article are a compilation of experimentally derived information obtained from persons with renal insufficiency.

Almost all drugs excreted by the kidney are excreted in a linear relationship to the creatinine clearance. Thus, the dose interval may be determined from the creatinine clearance or the serum creatinine since the latter bears a linear relationship to the former. An example of a drug with an ideal behavior is kanamycin, and the appropriate dose or dose interval may be determined either from the serum creatinine concentration or the creatinine clearance.¹

The tables in the following sections will relate the dose intervals for the given drugs to the creatinine clearance with the assumption that normal doses are being employed.

GENERAL GUIDELINES

The chemotherapeutic agents have been divided into three groups on the basis of their usefulness in patients with renal insufficiency. Those in the first group are relatively nontoxic. Those in the second group are actively excreted by the kidneys and may be quite toxic in the presence of renal insufficiency. The agents in the third group are excreted primarily by the kidneys and are too toxic for use in patients with uremia. If an individual has significant residual renal function or if a chance remains

Special Series

The fourth article in this series is concerned with the use of antibiotics in the presence of renal failure, with emphasis on routes of excretion and calculation of dosage based on known alterations in the serum half-life of the drug.

The next article will deal with the management of tuberculosis in office practice and in the community hospital.

Doctor Marr is Assistant Professor in the Department of Internal Medicine, Washington University School of Medicine, and is with the University's Unit I Medical Service at St. Louis City Hospital.

that he may recover renal function, potentially nephrotoxic agents should be avoided unless there are no alternatives.

AGENTS OF LOW TOXICITY

Penicillins. Under normal conditions, penicillin G and the semisynthetic penicillins are excreted primarily *via* the kidney. Approximately 10% of penicillin G is eliminated by glomerular filtration and 90% by tubular excretion. Renal clearance, therefore, approximates the total renal plasma flow. Although the semisynthetic penicillins are excreted in the same manner, they also are excreted to a moderate extent in the bile. This is particularly true of ampicillin, although it is subject to enterohepatic recirculation and its ultimate excretion is *via* the kidney. Carbenicillin is excreted in the same manner as penicillin G. It should be remembered that 10 gms of carbenicillin contain 45 meq of sodium; this may be important in treating persons with renal impairment.

Cephalosporins. These are all derivatives of 7-amino cephalosporanic acid and, as such, are comparable to the extended spectrum penicillins. Cephalothin exhibits a larger relative volume distribution and longer plasma half-life than do the phenoxyalkyl penicillins. About 70% to 80% is excreted unchanged in the urine *via* tubular secretion. Part of the agent is transformed into the O-desacetyl metabolite which is biologically inactive and is excreted in the urine together with the active compound. Cephalixin is well absorbed after oral administration and is almost completely excreted in the urine in four hours; like the parent compound, it is both filtered and secreted. Cephaloridine is nephrotoxic and should be avoided in the presence of renal failure.

TABLE 1

Drug	Maintenance Dose Interval (hours) Based on Creatinine Clearance (cc/min)				Modification for Dialysis	
	100	80-50	50-10	<10	HEMO	PERITONEAL
Penicillins						
PCN-G	q8h	8	8	12	None	
Oxacillin ¹	q6h	8	8	10-12	None	
Methicillin	q4h	8	8	8-12	None	
Ampicillin	q6h	8	8	12		Add 50 mg/1 dialysis fluid
Carbenicillin ²	q4h	4	6-12	12	Add 2gm after dialysis	Add to dialysis fluid at desired serum concentration
Cephalosporins						
Cephalothin	q6h	6	6	8-12	One dose before and q4h during hemodialysis	Add to fluid at desired serum levels
Cephaloridine ³	q6h	6	12	24-36		
Cephalexin	q4-6h	4-6	8-10	36-64	Given 500 mg before and after dialysis	Add to fluid at desired serum levels

¹Applies to other isoxazolyl penicillins; biliary excretion increases during renal failure.²Assumes that infection is extraordinary and 4-5 gm doses are required.³Use 2 gm dosage when creatinine clearance is less than 10 cc/min. Cephalothin preferred in oliguria because of nephrotoxicity of cephaloridine.

Erythromycin and Lincomycin. About 2% to 5% of orally administered erythromycin is excreted in the urine, about 15% is detectable after intravenous infusion. The antibiotic is concentrated in the liver and excreted in an active form in the bile. Lincomycin is pharmacologically and therapeutically similar to erythromycin; its mode of excretion and toxicity are likewise comparable. The recently introduced drug clindamycin (7-chlorolincomycin) is essentially the same as lincomycin. Both of these drugs may be used in the presence of renal failure and do not require a reduction in dosage. They are not dialyzed significantly by either route.

Chloramphenicol. This drug is inactivated primarily in the liver and is rapidly excreted in the urine. Over a 24-hour period, about 90% of an orally administered dose is excreted in the urine; about 10% is in the biologically active form. The remainder is a hydrolysis product and a glucuronic acid conjugate. The unaltered antibiotic is eliminated by glomerular filtration and the inactive degradation products primarily by tubular secretion. In the presence of renal insufficiency, the plasma half-life of the biologically active drug is not significantly prolonged but that of the conjugated, inactive form is markedly extended. Because of this, the regimen for persons with kidney disease is the same as that for normals. Although the rate at which chloramphenicol is conjugated with glucuronic acid may be reduced in individuals with hepatic failure, the overall metabolism is essen-

tially normal. Nevertheless, the administration of chloramphenicol in the presence of liver disease frequently results in depression of erythropoiesis. Chloramphenicol is not dialyzed significantly by either route.

The dose interval modifications for the above agents are listed in Table 1.

TOXIC AGENTS

Tetracyclines. The tetracyclines must be administered with great care in individuals with renal impairment. There are, however, differences among these antibiotics with respect to their persistence in the blood and in the amounts recovered in the urine in patients with renal insufficiency. For example, in azotemia, tetracycline persists in the blood for an extended period of time while chlortetracycline is excreted almost as in normal individuals. The extent to which the tetracyclines are excreted in the urine in the presence of renal insufficiency is in the following order of decreasing amount: oxytetracycline, tetracycline, demethylchlortetracycline, chloratetracycline. Table 2 lists the dosage modification for generic tetracycline in persons with renal insufficiency. This drug is the best studied of all of the tetracyclines and, therefore, is preferred for use in persons with renal failure. There is little information regarding the metabolism of the other tetracyclines in renal insufficiency and they are best avoided.

Aminoglycosides. One must be extremely cir-

TABLE 2

Drug	Maintenance Dose Interval (hours) Based on Creatinine Clearance (cc/min)				Modification for Dialysis	
	100	80-50	50-10	<10	HEMO	PERITONEAL
Streptomycin	q12h	24	24-72	72-96	Add 250 mg at end of each dialysis	
Kanamycin	q8h	24	24-72	72-96	Give 7 mg/kg after every other dialysis	Add to fluid at desired serum levels
Gentamicin ¹	q8h	8-12	12-24	48	Give 80 mg after each dialysis	Add to fluid at desired serum levels
Vancomycin	q12h	24-72	72-240	240	None	
Tetracycline	q6h	12	48	72-96	None	
Colistimethate	q12h	24	36-60	60-92	None	2mg/kg/day during dialysis

¹Based on 1 mg/kg.

cumspect in administering these agents to an individual with renal insufficiency. In patients with anuria, blood levels may remain high for many days and permanent ototoxicity is very common. About 50% to 60% of a parenterally administered dose of streptomycin appears in the urine in the first 24 hours. The rate of renal clearance of streptomycin in man is about 30% lower than the glomerular filtration rate. Kanamycin is primarily filtered by the glomeruli and about 50% to 80% is recoverable in the urine in a 24-hour period following injection. Gentamicin is cleared most rapidly, in about six to eight hours. Of the aminoglycosides, neomycin is perhaps the most toxic, producing tubular damage at doses only two to three times the therapeutic dose; it will not be discussed further. Kanamycin is intermediate in toxicity, producing damage at three to ten times the therapeutic dose; streptomycin has only mild renal toxicity, requiring about 20 times the therapeutic dose. Gentamicin appears to have very little nephrotoxicity, although experimental work would indicate that it probably is of the order of streptomycin. Nevertheless, because of their propensity to cause renal tubular damage, these drugs are not given in combination, even in the presence of normal renal function. Vancomycin achieves much higher concentrations in the blood of persons with renal insufficiency, since about 80% of an injected dose is excreted by the kidneys under normal conditions. This drug should, therefore, be avoided in persons with renal insufficiency.

Polymyxins. These are excreted by the kidneys and possess a significant nephrotoxicity. Polymyxin B appears to be somewhat more toxic than Polymyxin E (Colistin). For this reason, only the latter agent will be described. The methanesulfonate salt (colistimethate) is hydrolyzed to yield colistin in the tissues. It releases the antibiotic slowly from injection sites, thereby damping fluctuations in serum concentrations. The height and duration of plasma concentration are related to the degree of renal insufficiency, and hemodialysis does not reduce the quantity of this drug in the circulation of uremic patients.

drolyzed to yield colistin in the tissues. It releases the antibiotic slowly from injection sites, thereby damping fluctuations in serum concentrations. The height and duration of plasma concentration are related to the degree of renal insufficiency, and hemodialysis does not reduce the quantity of this drug in the circulation of uremic patients.

AGENTS AVOIDED IN RENAL INSUFFICIENCY

Nitrofurantoin, methenamine mandelate (Mandelamine) and p-aminosalicylic acid should all be avoided in persons with renal failure. Unlike the other cephalosporins, cephaloridine should not be used in persons with renal insufficiency. As mentioned above, vancomycin should be avoided in persons with renal insufficiency; however, due to the fact that it is occasionally required for treatment of penicillin-resistant staphylococci or perhaps the enterococcus,² it has been included in Table 2. A description of the method for modifying the dosage of antituberculous agents will be given in a forthcoming article.

The above tables were adapted from the writings of Bennett *et al*,³ Greenberg and Sanford⁴ and Kunin.⁵

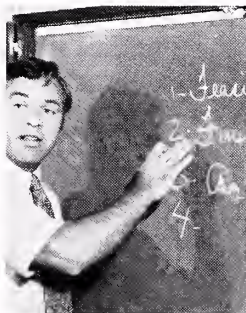
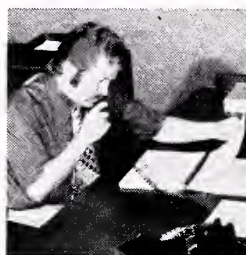
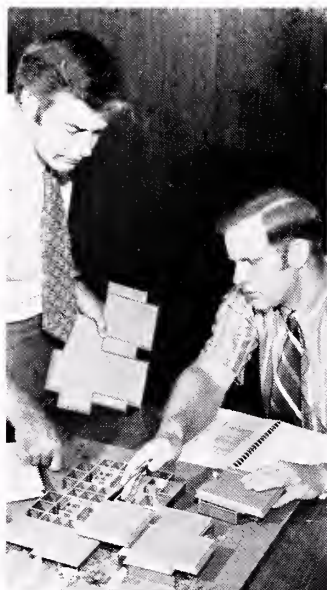
Acknowledgement: The author expresses appreciation for permission to reprint Tables 1 and 2 adapted from Marr, J. J., *Antibiotics and Infectious Diseases* in Rosenfeld, J. (Ed.), *A Manual of Medical Therapeutics*, published by Little, Brown and Co., Boston in 1971.

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President's Message

With nostalgia, surviving the perennial hot August "dog days" has meant getting ready for the opening of the fall school session. This always has been a vibrant, exciting period in the life of the "school age" young. It's as though annually one is transfused to start life anew with a fresh pair of "jeans," enrollment, a new football season, academic challenge not yet confronted, new people, new teachers and whole new worlds to conquer.

This is the scene. Of course, it's much more at the new UMKC Medical School. Since funding of \$700,000 in June by the Missouri Legislature for its 1971-1972 operation, activity at the school and of the staff has been almost frantic, although orderly. The stretch drive had been exceptionally well planned, assuming monies would be provided for the formal opening.

A unique selection committee, composed of several departmental heads of UMKC's full-time (docent) physicians and complimented by several outstanding clinicians of the metropolitan area, has laboriously and carefully selected 40 outstanding students for the first-year class in this new program.

The freshman class will ultimately be composed of 100 students. During 1971-1972, a second-year class will be composed of all or a major percentage of 18 students selected last year as a part of this prospective program. Enrolled in the UMKC liberal arts program in two groups of nine each, they participated in medical orientation through the past year under the tutelage of Nate Winer, M.D. at Menorah Hospital and Ralph Hall, M.D. at St. Luke's Hospital in Kansas City. The reports of the progress and accomplishments of these young people just off of the high school campus are indeed startling and impressive. I am told that additional appointments to classes of the third-, fourth- and fifth-year levels have been made.

The remarkably innovative, exciting and new noncontemporary programs have been made possible by many people throughout the state. The Governor, legislators, University of Missouri Board of Curators, Missouri State Medical Association and many citizens and physicians of the Kansas City area plus other individuals and groups deserve accolades for their contributions to Missouri's current attack on the health manpower problem.

In my opinion two men behind the scenes must be given due credit. Without them, this project might well have not reached realization. *E. Grey Dimond*, *Provost for Health Sciences*, has exhibited uncanny and tireless leadership, apparently generating an almost compulsive drive at times (come hell or high water). A good general who is knowledgeable, suave and "hard nosed" at times, he is not always easy to read, which perhaps is as it should be. *Dean Richardson K. Noback* probably has logged more hours for the project than all of us subordinates collectively. He has been totally dedicated, seemingly tireless, thoughtful and compassionate. Although contemporary-oriented educationally, he has flexibility. Gentlemen, I believe the superstructure of this educational effort is commendable.

"Dog days" takes on a new look on Hospital Hill in Kansas City. The project, with its community class rooms and many visionary innovations, will be under the scrutiny of medical educators and health architects throughout the United States. We thank God that we all have a small stake in this exciting challenge.



Gerald L. Miller, M.D.

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Warning: Irreversible deafness can occur. Tinnitus or vertigo may also occur and indicate vestibular damage and impending deafness. The risk is sharply increased with renal dysfunction. In such cases, decrease size and frequency of doses. Discontinue kanamycin and check hearing if azotemia increases. Watch carefully for ototoxicity in older patients and patients receiving more than 15 Gm. of kanamycin. To avoid neuromuscular paralysis with respiratory depression, postpone intraperitoneal instillation in post-operative patients until recovery from anesthesia and muscle relaxants is complete. Avoid concurrent use of other ototoxic drugs including ethacrynic acid. Safety in pregnancy is not established.

Indications: Serious infections due to susceptible strains of *E. coli*, *Proteus* sp., *Enterobacter aerogenes*, *K. pneumoniae*, *Serratia marcescens* and *Mima-Herellea*. Culture and sensitivity studies should be performed.

Contraindications: A history of hypersensitivity to the drug. Prior auditory damage by kanamycin or other agents may be a contraindication if effective alternative therapy is available.

Precautions: Obtain audiograms before and during therapy in patients with

renal dysfunction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules. Assess renal function periodically, both before and during therapy. If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary — in azotemic patients the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy. Mycotic or bacterial superinfection may occur.

Adverse Reactions: Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias.

Dosage and Administration: The maximum total daily dose should not exceed 1.5 Gm. by all routes of administration. The usual dose is 7.5 mg./Kg./12 hours I.M. The average adult dose is 1 Gm. daily. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours.

If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.

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Woman's Auxiliary



I am proud to report to the members of the MSMA and the Woman's Auxiliary that the Auxiliary's Environmental Health Package Program has been officially adopted by the Woman's Auxiliary of the AMA for its source sheet on Ecology and Environmental Health Committees throughout the United States. Although this was a goal of our Missouri report and the exhibit we prepared for the Atlantic City convention, we did not learn of this exciting development until the last week in July. I'm confident you will agree that, in this instance, our "Show Me" state of Missouri "showed them!" What a wonderful "first" for the Missouri Woman's Auxiliary, thanks to the MSMA and the hard-working doctors' wives who did such an excellent job under the leadership of Mrs. William M. (Pat) Walker, our Immediate Past-President.

Our State Auxiliary Fall Conference will be held on October 20-21 at the Holiday Inn in Cape Girardeau. The hostesses will be the members of the Cape Girardeau County Woman's Auxiliary with the cooperation of the Tenth District. The latest report I have received from Mrs. James (Polly) Kinder, President, states that preparations are going well.

At this time, I will not reveal all details of the Conference program being planned. However, I want to be sure you all realize that the Fall Conference is planned for every member of the State Auxiliary, as well as the county presidents and presidents-elect. Please urge your wife to attend.

Also, members of the MSMA will be interested in knowing that Dr. William L. Kester will be the after-dinner speaker at our banquet on Wednesday, October 20. We hope you will make a special effort to attend this dinner with your wife.

For the past 13 years, Doctor Kester has been a physicist for the McDonnell Aircraft Corporation in St. Louis. At the present time, he is Director of the Department of Engineering in Chemistry and Physics, which consists of five laboratories. His latest invention, a lightning machine which can produce 2,000,000 volts of electricity, has been sought for many years by the aircraft industry to measure and lead to better understanding of the effects produced when lightning strikes an aircraft in flight.

Doctor Kester will speak to us about the cosmological theories of the origins of planets, stars and galaxies. I also suspect that he will report startling news of recent research developments he believes will change the face of medicine within the next ten years.

Again, I cordially invite you to attend the banquet with your wife and to take advantage of this opportunity to hear Doctor Kester's unusual presentation. Doctor Valach and I know him well, and we suggest that this is one event you should not miss.



Mrs. Frank J. Valach
President

EDITORIAL

FDA 'EFFICACY' RULE: DOES IT WORK?

(The following editorial was written by Louis Lasagna, M.D., Professor of Pharmacology and Toxicology, University of Rochester School of Medicine and Dentistry. It was published by The Wall Street Journal on April 8, 1971 and is reprinted with permission of The Wall Street Journal.)

Perhaps the most thankless job that falls to any government agency today is the responsibility carried by the Food and Drug Administration for screening out harmful or useless medicines from those that can help prolong life or alleviate discomfort. This evaluation requires a rare combination of prudence and pragmatism in the sifting and weighing of enormously complex technical evidence. It is beset by countless difficulties. The efforts of the FDA to review the effectiveness of medicines that have been on the market for many years epitomizes these difficulties and underlines the ever-present risk that regulatory efforts may not only fall short of their objective but may actually undermine it.

FDA Commissioner James Goddard was a flamboyant and controversial public servant. One of his most popular moves, however, was to enlist the academic scientific establishment to review the claims made for drugs that were already on the market at the time of the passage of the 1962 Kefauver-Harris Amendments.

This legislation, among other things, empowered the FDA to require, for new drugs, evidence of efficacy as well as safety. The law also provided for re-evaluation of older medicaments, which had been approved during a period when modern concepts of valid clinical evidence were still evolving. But the task of reassessing many hundreds of existing products and therapeutic effects was formidable, and the FDA was finding it difficult to discharge even routine responsibilities.

DR. GODDARD'S IDEA

Dr. Goddard had a brilliant idea: Why not use non-FDA experts? Such a move would not only relieve the agency of a heavy burden, but invoke the prestige of academic experts in support of any regulatory decisions that might subsequently be made. In 1966, the National Academy of Sciences-National Research Council, despite some misgivings, signed a contract with the FDA. Three years later, the Final Report on the NAS/NRC Drug Efficacy Study was published.

Today, the FDA is "implementing" the recommendations of that study. Some drugs have been taken off the market, and others are slated for discard. These actions might appear on their face to represent the collective best judgment of the scientific community. But there is evidence of increasing doubt,

even in quarters not usually considered pro-industry, that the current regulatory policy is in the public interest. Why?

To begin with, the study was of necessity imperfect. Its panels were chosen from scientists nominated by the chairmen, allowing for parochial biases. The magnitude of the task—almost 3,000 drugs and more than 10,000 claims—precluded exhaustive attention to detail or the presentation of extensive supporting information from the manufacturers.

The rating classifications established for the guidance of the panels—"ineffective," "possibly effective," "probably effective" and "effective"—were not clearly defined or easy to apply. Panels were inconsistent in their use of the terms, and new classifications had to be devised: "effective but . . ." and "ineffective as a fixed combination." The classifications were later said to imply certain FDA actions, but this information was not known to the panels during most of their deliberations, and the NAS/NRC experts rendered their judgments in ignorance of what might happen as a consequence of their opinions.

No one could have guessed, for example, that what the experts called "probably effective" would be interpreted as "probably *not* effective," or that that manufacturers of drugs so judged would be given one year to produce evidence (of the "controlled clinical trial" variety) that the claims were justified. More than one expert was amazed to find that a "possibly effective" rating carried with it a grace period of only six months, barely time to plan trials and find the (all too rare) investigators willing and able to perform them, let alone conduct the experiments and analyze the data. No panel member ever imagined, I dare say, that panel ratings might be required by FDA decree to be included in drug advertising, as is now proposed.

A second major source of confusion and concern arises from the inconsistency of the FDA. The agency's early comments suggested a flexibility in approach to older remedies. Here, for example, in the FDA's own words, is its January, 1964 approach to regulations for controlling prescription drug advertising:

"The point was made by the drug industry that some old drugs, long in use in medical practice, had substantial clinical experience to support their claims, although they have not been subjected to the kind

of controlled clinical investigations that are needed to support the claims for new drugs.

"Under the revised regulations, FDA will accept adequately documented clinical experience to support the advertising claims for old drugs."

The legislative history of the 1962 amendments, as well as pronouncements from government officials, indicated that the evidence on a new drug was to be "substantial," not "preponderant," so that a respectable minority opinion on utility could justify approval of a new therapeutic agent. But more recent FDA regulations, narrowly defining what is "substantial evidence," have now made the approval of a drug dependent on one particular school of thought, and have relegated to the dustbin any other type of evidence, despite the protestations of many doctors that a doctrinaire, exclusive approach of this kind is unwise.

Nor is the FDA simply changing its philosophy: its actions show a remarkable inconsistency, even in the recent past. Thus between 1967 and 1969, at a time when drug combinations were in obvious bad odor in Washington, ten companies have been granted approval to sell mixtures of phenobarbital and an anti-anginal drug, and 13 old anti-Parkinsonian drugs have recently had their worth reaffirmed by the FDA. In none of these cases does the literature lead one to believe that the FDA's "modern" standards have been met. It seems, rather, that when the "experts" or the FDA wish to consider old-fashioned "evidence" acceptable, they do so.

The legislative history of the Kefauver-Harris amendments also reveals that Congress scrupulously intended to avoid judgments of "relative efficacy," that is, the effectiveness of one marketed drug compared to another. There was no intention to prohibit sale of a drug merely because it was less effective than some other; simply demonstrating efficacy was said to suffice. Yet the FDA concept of "ineffective as a fixed combination" can be looked upon as an exercise in relative efficacy judgments. The famous Panalba combination, for example, was branded "ineffective" when in fact there was no doubt that the two ingredients were effective antibiotics, and that in the recommended doses at least one of these, tetracycline, was unquestionably effective in treating many infections. What the FDA asserted was that Panalba was no better than one of its ingredients given alone. (No one has any clinical trial data proving this, I might say, and there is actually a certain amount of evidence to the contrary.)

DEVELOPING NEW PHRASES

Most disturbing, in some ways, is the FDA decision to summarily remove drugs from the market without a hearing. For some years the Secretary of Health, Education and Welfare has had the right to do this if he makes a finding of "imminent hazard to the public health," and since April 1969 the FDA commissioner has had such power regarding anti-

biotics. But no one could seriously label Panalba an imminent health hazard, so that new phrases have been devised, such as "significant medical hazard" and "unwarranted hazard."

What is the justification for this abuse of due process? Why not grant evidentiary hearings? The FDA's capable chief attorney, W. W. Goodrich, explained why before the American Bar Association last August:

"Would it not have been better to proceed at least with a few hearings to elucidate the tests that should apply to the term 'substantial evidence'? The answer is that without these rules, the agency could not implement the NAS/NRC drug efficacy evaluations within the foreseeable future—not even within our lifetimes. A massive case load of the sort that FDA faces cannot be handled without procedural devices. The summary judgment rule is such a device."

(One wonders whether it will be suggested that some such approach might clear the crowded dockets of the courts of our land. Judges—or district attorneys—could simply rule on the basis of the evidence as they saw it, without all that fuss and bother about adversary confrontation, cross-examination, a jury of peers, etc.)

One can sympathize with the FDA. In one sense its leaders are always stuck with the judgments of their predecessors (there have been four commissioners in five years) and thus may present an appearance of inconsistency or contradiction when they are simply changing with the times. They are under attack from all quarters—at the moment, for instance, the drug industry is accusing them of hasty and cavalier actions, while the American Public Health Association and the National Association of Retired Employees has brought suit against the agency for being too slow to eliminate unwarranted drug claims. But we must not allow our sympathy as to the difficulty of the task to interfere with our objective judgment of the results.

The FDA worries many of us these days. And one of the biggest worries is its "implementation" of the NAS/NRC Study. Speaking as one of the panel chairmen in that study, I can only express dismay at the impact our recommendations seem to be having. I'm not sure which metaphor is more apt, Pandora's box or Frankenstein's monster, but the results are frightening to view.

IMPAIRING RESEARCH AND DEVELOPMENT?

An extremely worrisome specter is the impairment of the research and development programs of drug companies whose business would be substantially affected by the proposed FDA actions. In the last analysis, the health of the public is crucially dependent upon unremitting efforts to search out, develop and introduce new drug cures and improvements of existing drugs. These efforts are bound to be hurt by reduced revenues and earnings as fi-

nancial restraints are exerted both upon the scale and riskiness of research and development projects that can be undertaken. An FDA official has estimated that prescription drugs that are vulnerable to removal from the market under the FDA proposals involve annual sales of close to \$500 million, roughly 10% of the total volume of prescription drugs marketed in the U. S. Almost half of the products on the vulnerable list are drug combinations.

Safeguarding and promoting the public health is

of utmost importance. But that cause cannot be well served by an FDA policy which, out of an excessive concern for simplification of administrative machinery, uses questionably valid procedures to condemn products that have the confidence of experienced practitioners, deliberately makes it difficult to consider relevant evidence, and undermines financial support for those processes of pharmaceutical invention, innovation and improvement that are crucial to the long-run public good.

COMMENT . . .

Our Readers Write

PHYSICIANS SEEK HELP IN ESTABLISHING MEDICAL MUSEUM

Dear Editor:

There was a 19th century Missouri doctor who had a powerful effect upon American History. He was Dr. John Sappington, who made it possible for the white man to inhabit the vast central area of our country. He accomplished this amazing feat by introducing into the miasmatic middle west his quinine treatment for the "Ague" which made it possible to colonize this rich section with Easterners pushing westward.

Ten years ago, a group of citizens organized the "Friends of Arrow Rock" to preserve history, restore old buildings and collect artifacts for posterity. During the early 1800's, Arrow Rock was the most outstanding town financially, politically and socially west of the Missouri River. The state of Missouri and the Friends of Arrow Rock have recognized this fact, putting it in perspective as a 19th century Missouri River town by restoring the George Caleb Bingham home, where this outstanding 19th century genre artist painted many of his pictures with local citizens and background included: The old court house; the John Sites Gun Shop; the old printing shop and the Olde Tavern, built to accommodate Santa Fe travelers; the 19th century church, which now is the home of the nationally-known Repertory Theatre which has run for ten straight seasons; and many antebellum homes. In short, there are many attractions which draw visitors to this historic spot. But, what do we have to commemorate the man who lived so long in this community and opened it and the vast west to 40 million future Americans?

In some future time when men pause to assess the contributions of our historic heroes, certainly the medical men of the 19th century, who gave so much of themselves, should be given a great deal of recognition. They not only contributed so much to medicine, but many times were the outstanding leaders

of their communities. It was recently stated by Dr. Thomas Finley of Augusta, Ga., who made a detailed study of this area, that "A country doctor named John Sappington, who by clinical acumen, good business sense and a touch of serendipity, probably did more than anyone else to transform this wilderness into a home for 40 million people." This achievement was all the more remarkable since it long preceded the discovery of the malarial parasite by Loveran in 1880 and its transmission by the mosquito by Ross in 1897. There were many diseases and problems in this area, but the biggest enemy was the "Ague." Doctor Sappington's treatment of malaria 30 years before the war between the states will place him among the heroes of his time.

Doctor Sappington was born at Harve de Grace, Md., May 15, 1776, the son of Dr. Mark Brown Sappington who moved his family to Nashville, Tenn., in 1785. After his early education in schools of Maryland and Tennessee, he studied medicine as a preceptor with his father and became his associate in Nashville. In about 1800, he went into private practice at Franklin, Tenn., and then in Rutherford County, followed by Williamson County, Tenn. In 1814, he rode horseback to Philadelphia where he attended a course of medical lectures at the University of Pennsylvania for one year and received a certificate. In those days, two years were required for a diploma (which was not needed at that time in order to practice medicine), and being unimpressed with the teachings of Rush and Cullen on the management of fevers, Doctor Sappington returned to Tennessee. In 1817, he moved to Howard County, Mo., and, two years later, to Saline County. Here, near the village of Arrow Rock where the Santa Fe Trail crossed the Missouri River, he established a home, where he died on Sept. 7, 1856.

Doctor Sappington was interested in many charitable enterprises. He left a large sum of money for the education of young people, since he believed that

education was the basis for a happy and successful life. He had an ecologist's faith; on all of his calls, he is said to have carried blue grass seed in his saddle bag and to have scattered it wherever he found a likely spot. Before the discovery of quinine, he was accustomed to relying upon the use of the Peruvian bark in treating malaria and renounced the treatment of fever and disease by the depletion method, which consisted of bleeding, purging and puking, used by the medical giants of the time. Malaria was widespread and accepted as a way of life. Many families kept a demijohn filled with chopped Peruvian bark with the interspaces filled with spiritus fermenti. Every morning, each member of the family had to swallow a liberal draught before breakfast.

It is thought that Doctor Sappington used quinine exclusively soon after it became available in 1823. In 1832, the wholesale manufacture and distribution of his historic pills began. The story goes that he instructed his son to go to Philadelphia to buy 100 ounces. He returned with 100 pounds which practically depleted the market. At \$15 an ounce, Doctor Sappington decided to dispense it commercially. Each pill contained 1 grain of quinine sulphate, $\frac{3}{4}$ grain of licorice, $\frac{1}{4}$ grain of Myrrh and oil of sassafras to flavor. The quinine content of the pill was never mentioned publicly because of the medical profession's prejudice against it and because he wished it to stand on its own merit. The results were so spectacular that Doctor Sappington taught his slaves how to compound and roll the pills. Testimonials poured in, mostly from grateful laymen, but some were from physicians who were surprised to find that the fever could be cured without the lancet. Some of the prominent men in the medical profession condemned his merchandising technique, but this was the only way that he could prove his theory and belief.

In 1844, he published the first medical treatise west of the Mississippi River. It stated, "Dedicated to the people of the United States, more particularly that portion of them with whom I have had a personal acquaintance and from whom I have always received a cordial welcome and generous support; and also to that portion of the medical profession who can so far divest themselves of the prejudices of education as to give to the following pages unbiased and impartial perusal, is this work inscribed by its author." This is an interesting treatise on the history and development of medicine by a country doctor who had the knowledge, foresight and guts to challenge the medical hierarchy of the times on medical treatment and on principles which he felt to be correct.

The Friends of Arrow Rock seek the cooperation of all the doctors in Missouri and surrounding states in establishing a medical museum in Arrow Rock to be dedicated to the Pioneer Country Doctor. This

will require much concerted effort of many people. The Friends of Arrow Rock, a not-for-profit group, has authorized the printing of copies of the original book, "The Theory and Treatment of Fevers," by Dr. John Sappington to be sold to raise money for the purpose of erecting such a medical museum.

The cooperation of the medical profession is needed in collecting medical instruments, tools of pharmacy, medical books of that period and furniture used in the country doctor's office in the early 1800's. All these should be preserved and displayed.

There will be many hours of planning and frustrations in this effort, but gathering these memorabilia and artifacts will be a step in medical history. Anyone interested in this worthy project, whether it be to purchase copies of "The Theory and Treatment of Fevers" by Doctor Sappington or to donate artifacts or memorabilia or books or to make money donations, please contact the following persons:

Mrs. John Hall, President of Friends of Arrow Rock, Marshall, Mo. 65340

Dr. John R. Lawrence, Marshall, Mo. 65340

Dr. E. Lee McCorkle, Marshall, Mo. 65340

Dr. A. C. McBurney, Slater, Mo. 65349

Thank you,

John R. Lawrence, M.D.
Marshall, Mo. 65340

Announcement

American Board of Family Practice

EXAMINATION

The American Board of Family Practice announces that it will give its next examination for certification in various centers throughout the United States. The examination will be over a two-day period on April 29-30, 1972. Information regarding the examination can be obtained by writing:

Nicholas J. Pisacano, M.D., Secretary
American Board of Family Practice, Inc.
University of Kentucky Medical Center
Annex #2, Room 229
Lexington, Kentucky 40506

PLEASE NOTE: Deadline for receiving completed applications in the Board office is *February 1, 1972.*

THE NIGHT SHIFT OF DEPRESSION...

Depression is a 24-hour-a-day problem... and disturbed sleep is often its nocturnal expression. In fact, such disturbance may be a key symptom in establishing the diagnosis of depression.



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When depression is serious enough to warrant medication, ELAVIL HCl may prove extremely helpful. Unlike psychic energizers or agents that merely elevate mood, ELAVIL HCl embodies a mild antianxiety action which manifests itself even before the fundamental antidepressant activity of the drug becomes evident. Daytime drowsiness occurs in some patients, usually within the first few days of therapy.

NOTE: Not recommended during the acute recovery phase following myocardial infarction. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible. Should not be given to patients who have received an MAOI within two weeks.

Contraindications: Known hypersensitivity. Should not be given concomitantly with or within at least 14 days following the discontinuance of a monoamine oxidase inhibitor. Then initiate dosage of amitriptyline HCl cautiously with gradual increase in dosage until optimum response is achieved. Not recommended during the acute recovery phase following myocardial infarction or for patients under 12 years of age.

Warnings: May block the antihypertensive action of guanethidine or similarly acting compounds. Should be used with caution in patients with a history of seizures or urinary retention, or with narrow-angle glaucoma or increased intraocular pressure. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. Safe use during pregnancy and lactation has not been established; in pregnant patients, nursing mothers, or women who may become pregnant, weigh possible benefits against possible hazards to mother and child.

Precautions: When used to treat the depressive component of schizophrenia, psychotic symptoms may be aggravated; in manic-depressive psychosis, depressed patients may experience a shift toward the manic phase, and paranoid delusions, with or without associated hostility, may be exaggerated; in any of these circumstances, it may be advisable to reduce the dose of amitriptyline HCl, or to use a major tranquilizing drug, such as perphenazine, concurrently.

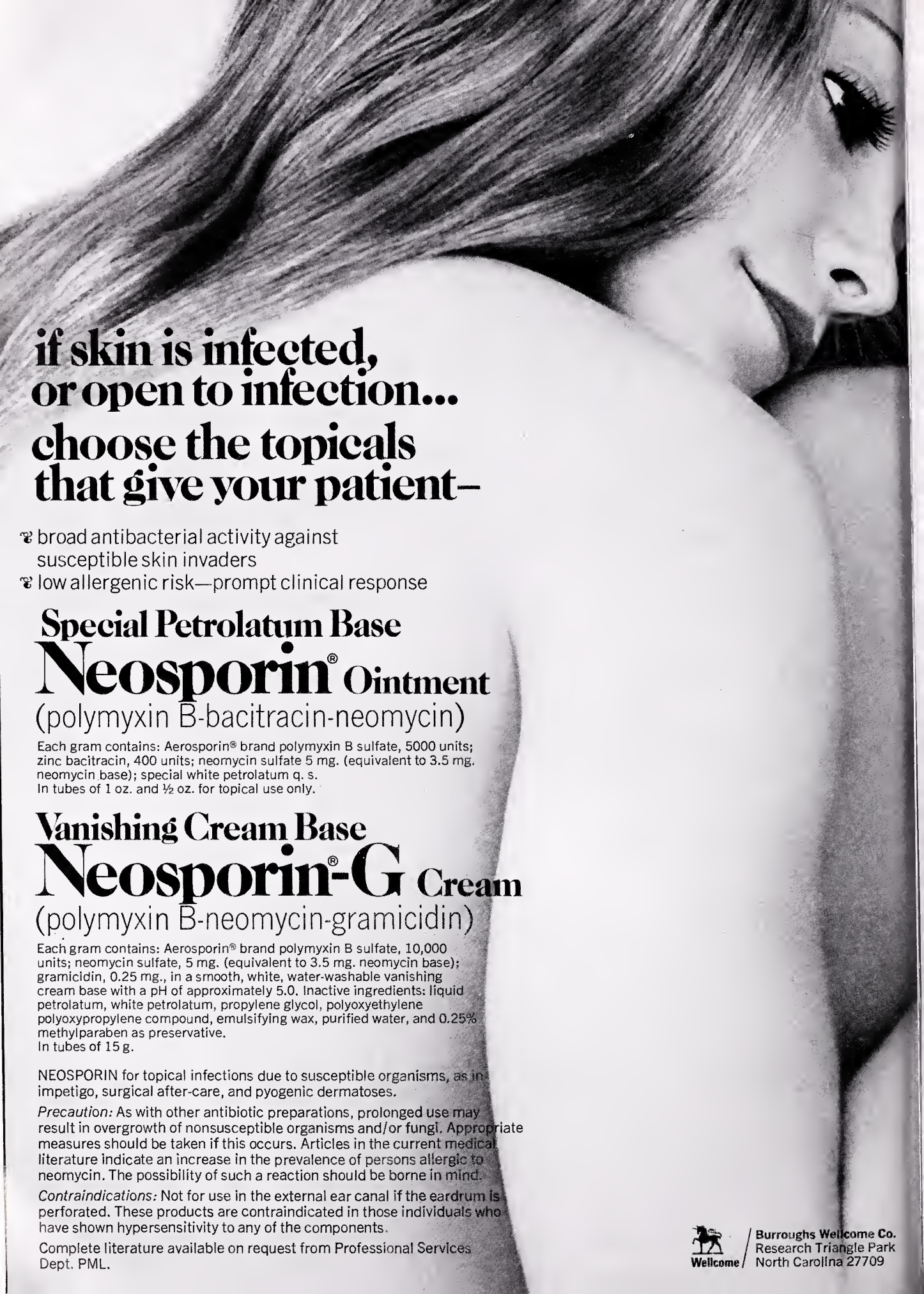
When given with anticholinergic agents or sympathomimetic drugs, close supervision and careful adjustment of dosages are required. May enhance the response to alcohol and the effects of barbiturates and other CNS depressants. The possibility of suicide in depressed patients remains during treatment and until significant remission occurs; this type of patient should not have easy access to large quantities of the drug. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.

Adverse Reactions: *Note:* Included in this listing are a few adverse reactions not reported with this specific drug. However, pharmacological similarities among the tricyclic antidepressant drugs require that each reaction be considered when amitriptyline is administered.

Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. **CNS and Neuromuscular:** Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms. **Anticholinergic:** Dry mouth, blurred vision, disturbance of accommodation, constipation, paralytic ileus, urinary retention, dilatation of urinary tract. **Allergic:** Skin rash, urticaria, photosensitization, edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. **Gastrointestinal:** Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, parotid swelling. **Endocrine:** Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female, increased or decreased libido. **Other:** Dizziness, weakness, fatigue, headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, drowsiness, jaundice. **Withdrawal Symptoms:** Abrupt cessation of treatment after prolonged administration may produce nausea, headache, and malaise; these are not indicative of addiction. **How Supplied:** Tablets containing 10 mg and 25 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100, 1000, and 5000; tablets containing 50 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100 and 1000; for intramuscular use, in 10-cc vials containing per cc: 10 mg amitriptyline HCl, 44 mg dextrose, and 1.5 mg methylparaben and 0.2 mg propylparaben as preservatives.

For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

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Special Petrolatum Base
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Each gram contains: Aerosporin[®] brand polymyxin B sulfate, 5000 units; zinc bacitracin, 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q. s.
In tubes of 1 oz. and ½ oz. for topical use only.

Vanishing Cream Base
Neosporin[®]-G Cream
(polymyxin B-neomycin-gramicidin)

Each gram contains: Aerosporin[®] brand polymyxin B sulfate, 10,000 units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg. neomycin base); gramicidin, 0.25 mg., in a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, purified water, and 0.25% methylparaben as preservative.
In tubes of 15 g.

NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical after-care, and pyogenic dermatoses.

Precaution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: Not for use in the external ear canal if the eardrum is perforated. These products are contraindicated in those individuals who have shown hypersensitivity to any of the components.

Complete literature available on request from Professional Services Dept. PML.



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From the Medical Schools



UNIVERSITY OF MISSOURI-KANSAS CITY

The University of Missouri-Kansas City has announced the appointment of 21 persons to four councils for the new School of Medicine. Appointees are individuals selected from the College of Arts and Sciences, the Schools of Dentistry and Pharmacy and clinicians from the Greater Kansas City area.

The councils, which are to provide the principal administrative and academic leadership for the Medical School, replace the traditional departmental organization found in most medical schools.

An assistant dean and executive head will be in charge of each of the Councils on Curriculum, Evaluation and Selection. These positions will be filled by Dr. Andrew C. McCauley, chief of the Division of General Surgery at Kansas City General Hospital and Medical Center, Selection; Dr. Ned W. Smull, director of Children's Mercy Hospital, Evaluation; Dr. Charles B. Wilkinson, executive director of the Greater Kansas City Mental Health Foundation, Curriculum. Their work with these major councils will be in addition to their present administrative and clinical responsibilities in other Hospital Hill programs.

A fourth Council of Docents will consist of Dr. Robert Mosser, Independence internist, and the husband-and-wife team of Dr. William T. Sirridge, endocrinologist, and Dr. Marjorie S. Sirridge, hematologist, from Kansas City, Kan.

The docent phase of the medical student's education will begin in the third year, following the first two years of both arts and sciences and medical school studies. During the final four years, the student will have approximately 25% of his time available for courses from the College of Arts and Sciences.

This fall, each docent will start with a unit of 12 students. As the school reaches its full enrollment of 400 students, four docents and 50 students will make up docent teams. The docent team will consist of the docent, associate docents, visiting docent, outpatient physicians, residents and related nursing, pharmacy and ancillary personnel. The team will be responsible for providing care to patients in a 20-bed unit and in the related ambulatory care program. Each team

will utilize related teaching and research laboratories.

Named to the Council on Selection are Dr. David Baeder, professor of pharmacology; Mrs. Virginia Calkins, Office of Medical Education; Dr. Robert Farnsworth, professor of English and department chairman; Dr. James E. Herbertson, professor of anatomy and assistant dean of the School of Dentistry; Dr. John Mayer, surgeon; Dr. Martin Mueller, internist; and Dr. Marjorie Sirridge.

Appointed to the Council on Evaluation are Dr. Michael M. Burgess, professor of psychology and department chairman; Dr. Glen H. Eberhart, professor of pharmacology; Dr. Paul Koontz, surgeon; Dr. William E. Mayberry, professor of psychology; Dr. Walter Stelmach, family practitioner; and Dr. Mosser.

New members of the Council on Curriculum are Dr. Norman Ackerman, surgeon; Dr. Henry Mitchell, professor of biology and associate dean of the College of Arts and Sciences; Dr. Philip Olson, professor of sociology and department chairman; Dr. Herbert Wenner, virologist; Dr. Ralph Hall, internist; and Dr. William Sirridge.

Other appointments and promotions include the naming of Dr. E. Grey Dimond, provost for health sciences, as distinguished professor of medicine; Dr. Richard K. Noback, acting dean of the Medical School since 1969, as dean of the Medical School; and Dr. Edward B. Cross, vice-provost for health sciences, as professor of medicine.

Two other title changes were made. Robert L. Brown was promoted from assistant to the provost for health sciences to assistant provost and lecturer in medicine, and Donald F. Kennedy, consultant to Dean Noback since last November, was named director of administration for the new Medical School.

Doctor Dimond said that in addition to work by the various administrative, academic and staff personnel, the UM-KC School has included the assistance of many community leaders.

UNIVERSITY OF MISSOURI-COLUMBIA

Dedication ceremonies and "open house" for the newly enlarged radiation therapy unit at the

University of Missouri Medical Center will be held on September 11, Dr. Gwilym S. Lodwick, professor and chairman of the department of radiology, has recently announced. Interested physicians are invited to attend.

Construction of the new addition, which was completed last Spring, more than doubled the unit's area and also permitted installation of advanced cobalt therapy equipment. Other facilities include a supervoltage therapy unit, conventional and low energy X-ray therapy equipment and an area for radium sources and their application. There also is a radiation therapy physics laboratory equipped with monitoring and radiation dose measuring devices.

The radiation therapy unit, which is under the direction of Dr. Ahsen T. Ozarda, associate professor of radiology, currently treats an average of 25 patients per day.

Fourteen students received certificates of proficiency in medical technology on August 6, culminating a calendar year of clinical training in the Pathology Department at the University of Missouri-Columbia Medical Center. Thirteen also will receive bachelor's degrees—B.S. in Medical Science through the College of Arts and Science or B.S. in Medical Technology through the College of Education.

Growing rapidly in the past few years, the medical technology program at the Medical Center now lists 150 graduates since 1956. Twenty-four seniors will enter clinical training in August, and there currently are 120 University freshmen through juniors enrolled in the program. The numbers indicate the growing interest in the allied health professions.

The Medical Center also offers clinical training in physical therapy, occupational therapy, inhalation therapy and radiological technology, all baccalaureate programs offered now in cooperation with the College of Education. Total enrollment is approximately 350 students.

WASHINGTON UNIVERSITY

A Specialized Center of Research (SCOR) on thrombosis will be established by Washington University with a \$463,133 grant from the National Institutes of Health.

This is one of 34 grants from the National Heart and Lung Institute totaling \$16.4 million for creating SCORs at 29 universities and hospitals throughout the country. Five of the centers will concentrate on thrombosis, five on hypertension, 11 on pulmonary disease and 13 on arteriosclerosis.

The SCOR, which will utilize facilities in Washington University School of Medicine, The Jewish Hospital of St. Louis and Barnes Hospital, will be directed by Stanford Wessler, M.D., John E. and Adaline Simon Professor of Medicine and Jewish Hospital physician-in-chief. Assistant director will be Laurence Sherman, M.D., assistant professor of medicine and Jewish Hospital vascular division director.

Two fellowship grants have been made to School of Medicine scientists for research in kidney-related diseases.

Olu O. Oredugba, M.D., from Lagos, Nigeria, received a grant of \$6,000 from the National Kidney Foundation to investigate metabolic defects of individual patients with kidney failure. He will be working with Neal Bricker, M.D., professor of medicine and director of the renal division.

Joseph Giangiacomo, M.D., has been awarded a \$5,000 grant from the Kidney Foundation of Metropolitan St. Louis, Inc., for pediatric nephrology study under the direction of Alan Robson, M.D., associate professor of pediatrics. The study will concentrate on new diagnostic techniques.

The Medical Library Association, Inc., awarded two of its most prestigious honors to Estelle Brodman, Ph.D., librarian and professor of medical history in anatomy at Washington University School of Medicine, during its recent annual meeting in New York.

Doctor Brodman was selected to deliver the 1971 Janet Doe Lecture, honoring the former librarian at the New York Academy of Medicine who was the first editor of *A Handbook of Medical Library Practice*. It is considered by the Association the most important lecture in medical librarianship. She also was presented with the annual Marcia C. Noyes Award for her distinguished contributions.

ST. LOUIS UNIVERSITY

The St. Louis Veterans Administration Hospital and the St. Louis University School of Nursing and Allied Health Professions have announced the establishment of a program for training physician's assistants. The program, which is the first of its kind in the Midwest area, was scheduled to begin on August 31.

The Physician's Assistant Program was formulated in cooperation with the Washington University and St. Louis University Schools of Medicine, St. Louis and St. Louis County Junior College District and members of the Bi-State

Regional Medical Program. It is designed to train individuals to assist the physician by collecting historical and physical data, performing designated diagnostic and therapeutic procedures and coordinating the roles of more technical assistants. The educational curriculum covers a 24-month period.

The St. Louis University School of Medicine will receive funds in the amount of \$34,607 from the Tuberculosis and Respiratory Disease Society of St. Louis and Eastern Missouri to support a research project on Emphysema. Under the direction of Dr. Herbert C. Sweet, clinical professor of internal medicine, the project is to study the occurrence of Emphysema in St. Louis to establish a true incidence of the disease here and to correlate the effect of other conditions on the disease—such as, smoking and high densities of air pollution.

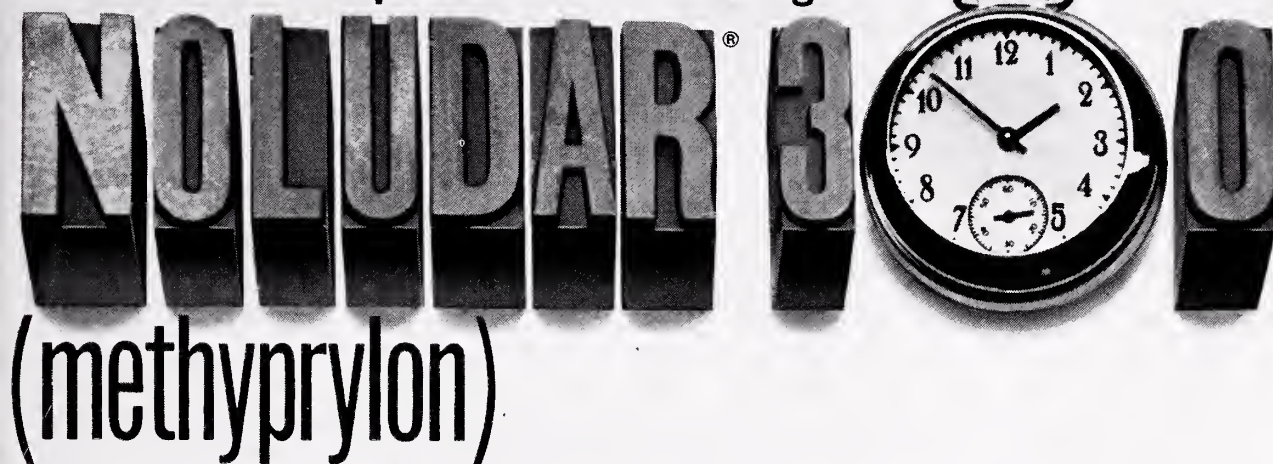
Dr. Jerome T. Y. Shen, associate clinical professor of pediatrics, was chairman of the committee which proposed and drafted the Minors' Consent Bill for Medical Treatment, a bill for treatment of pregnancy (abortion excluded), V.D. and drug abuse.

The committee, consisting of Juvenile Judges Noah Weinstein and Theodore McMillen, St. Louis University law professors Joseph Simeone, Mr. Donald King and Dr. Shen, was formed one and one-half years ago. Governor Warren E. Hearnes recently signed the bill into law.

Mr. Alexander M. Burrell has been named director of Medical Center public relations at St. Louis University. He will be responsible for all public relations and publications for the University's Medical Center. Mr. Burrell was formerly the director of information at Continental Telephone Corp.

Dr. Edwin E. Westura, associate professor of internal medicine and director of the Section of Cardiology, attended several meetings and conferences recently including the 18th Conference of Cardiovascular Training Grant Program Directors held in Pasadena, Calif.; the Third National Conference on Coronary Care which was held in Miami Beach, Fla.; and the 22nd Annual Meeting of the Missouri Heart Association held in Jefferson City, where he spoke on "The Work Evaluation Unit" at the Session for Heart Volunteers.

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Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with

withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly in-

crease hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

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Continuing Education Coming Events

- | | |
|-------------|--|
| Sept. 18 | Industrial Injuries of the Hand
The Hand Rehabilitation Center
Cori Auditorium, Washington University
5 AAGP hours |
| Sept. 23-24 | Inhalation Therapy Seminar
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Sept. 27-28 | School Health: The Roots of Responsibility
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Sept. 29 | Obesity Conference
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Oct. 7-8 | Radiologic Technology
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Oct. 13-14 | Non-Surgical Medical Emergencies
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Oct. 13-15 | Comprehensive Care for Neurological Disorders
Danciger Institute for Health Services
Menorah Medical Center, Kansas City 64110 |
| Oct. 19-20 | Medicine and Religion: The Middle Years
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Oct. 21-22 | Cardiopulmonary Resuscitation Training Course for Instructors
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |

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Emergency Care Training Course to Be Held in St. Louis

A four-day training course on emergency care and transportation of sick and injured persons will be held in St. Louis on September 27-30 at the Chase-Park Plaza Hotel.

Sponsored by the American Academy of Orthopaedic Surgeons, the course is designed for ambulance attendants, nurses, firemen, police officers, safety engineers, rescue squads and others who work with those requiring emergency attention.

Dr. Marshall B. Conrad, assistant professor of orthopaedic surgery, Washington University Medical School, will direct the course.

Physicians and others will speak and demonstrate on a wide variety of emergency medical situations. Traffic control at the accident scene, extrication from crushed autos, techniques of

lifting and carrying and care and complications of injuries are among the procedures taught in lectures and practice sessions.

The course has been expanded this year to include sessions on EKG interpretations, defibrillation and its indications and radio communications and telemetry.

With faculty members from Washington University and St. Louis University Medical schools, the lectures and work practice sessions will be given in cooperation with the schools, St. Louis Medical Society, St. Louis Chapter of the American Red Cross and St. Louis Fire Department.

For information and registration forms, contact Dr. Marshall B. Conrad, 4960 Audubon Ave., St. Louis, Mo. 63110.

'Industrial Injuries of the Hand' Seminar on September 18

The Hand Section of Plastic Surgery, in conjunction with the Hand Rehabilitation Center at Washington University, will present a Seminar entitled "Industrial Injuries of the Hand" on September 18 at the Cori Auditorium, Barnes Hospital in St. Louis for the general practitioner and surgeon who manage injuries of the hand.

Erle E. Peacock, M.D. will deliver the Annual Hand Rehabilitation Center Lecture. His title will be "Stiffness After Injury—Reoperate or Rehabilitate." Other subjects to be discussed will include airless paint gun and grease gun injuries, press injuries, fingertip injuries, fractures of metacarpals and phalanges, soft tissue loss and extravasation of fluids into the hand. A demonstration of nonoperative methods of mobilizing

the stiff hand is scheduled for the afternoon.

Guest speakers will include Drs. Walter F. Ballinger, Joseph Eades, Frederick L. Remark, Arthur H. Stein, Jr., George Zografakis and Paul M. Weeks of Washington University School of Medicine.

Members of the MSMA are invited to attend the Seminar. Registration will begin at 8 AM. The program is acceptable for 5 credit hours by the AAGP.

The registration fee is \$25.00. Advance registration for the one-day meeting, including the luncheon, can be made by writing to the Hand Section of Plastic Surgery, Department of Surgery, Washington University School of Medicine, 4960 Audubon Ave., St. Louis, Mo. 63110.

Hodgkin's Disease Will Be Subject of October Symposium

An Informational Symposium on Hodgkin's Disease will be sponsored by the National Cancer Institute on October 7-9, 1971 at the Chase-Park Plaza Hotel in St. Louis to acquaint physicians with recent developments in Hodgkin's Disease.

The speakers will be clinical investigators who have made outstanding contributions to the development of the present understanding of the disease. They will discuss many rapid changes which have occurred during the past few years

in the principles governing the diagnosis, staging, prognosis and treatment of patients. The sponsor points out that the clinician is faced with the responsibility of informing himself about and incorporating the new principles into the management of his patients.

All physicians, house staff and medical students are welcome. For detailed information, write to Mrs. J. Steinbraker, Room 10A03 Westwood Bldg., National Institutes of Health, Bethesda, Md. 20014.

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Dr. J. Enoch Powell to Appear at AAPS Annual Meeting

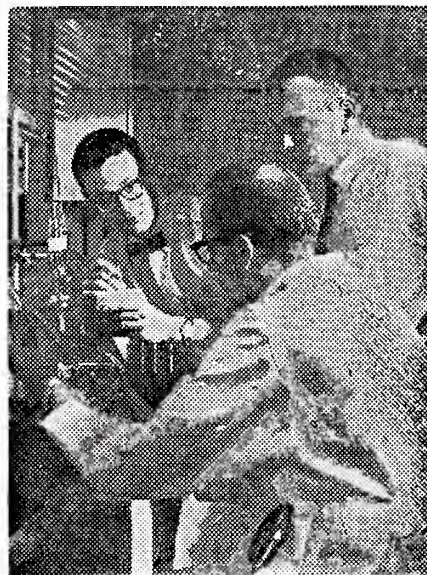
J. Enoch Powell, chief of the British National Health Service from 1960 to 1963, will be in the United States on Oct. 8, 1971 to address the annual meeting of the Association of American Physicians and Surgeons at the Colony Motor Hotel in Clayton.

The ex-Minister of Health in Great Britain is regarded as the world's leading authority on politically-controlled medicine. After trying for three years to make the British national health plan work, he now admits it is an inherent failure. He will explain the nature of that failure during the three-day AAPS meeting. He also will examine the whole network of connections between medicine and politics.

Powell has remained close to British politics since leaving his position as Minister of Health and currently is a member of Parliament, representing an industrial district centering on Birmingham, England. He is the author of several books, including *Medicine and Politics*.

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New Members

Miguel L. Abelardo, M.D., 5400 Arsenal, St. Louis, has become a member of St. Louis Medical Society. Dr. Abelardo is a native of Cabanatuan City, Philippines, received his preliminary education at San Beda College and his M.D. degree at Manila Central University in 1954. He specializes in internal medicine.

Mohammad T. Amjad, M.D., 1515 Lafayette Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Amjad is a native of Rasht, Iran and received his M.D. degree at Teheran University in 1961. He specializes in pediatrics-neonatology.

Metin Arat, M.D., Farmington State Hospital, Farmington, has become a member of Mineral Area County Medical Society. Dr. Arat is a native of Istanbul, Turkey, received his preliminary education at Istanbul University and his M.D. degree at Ankara University in 1951. Dr. Arat specializes in psychiatry.

Sangzin Bai, M.D., Barnes Hospital Plaza, St. Louis, has become a member of St. Louis Medical Society. Dr. Bai is a native of Osaka, Japan, received his preliminary education at Yon-Sei University and his M.D. degree at Yon-Sei University in 1960. He specializes in internal medicine.

Gerald L. Beckloff, M.D., 10236 Bunker Ridge Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Beckloff is a native of Hitchcock, Okla., received his preliminary education at the University of Kansas and his M.D. degree at the University of Oklahoma in 1961. He specializes in pharmaceutical research.

Edward F. Berg, M.D., 943 Bellstone Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Berg is a native of St. Louis, received his preliminary education at Washington University and his M.D. degree at Washington University in 1960. He specializes in ophthalmology.

Pacelli E. Brion, M.D., 1420 Grattan, St. Louis, has become a member of St. Louis County Medical Society. Dr. Brion is a native of San Pablo City, Philippines, and received his M.D.

degree at the University of the Philippines in 1964. He specializes in psychiatry.

Juan M. Castro, M.D., 972 Geyer Rd., St. Louis, has become a member of St. Louis County Medical Society. Dr. Castro is a native of Pampanga, Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1956. He specializes in internal medicine.

T. N. Cofer, M.D., 807 Stadium Rd., Columbia, has become a member of Grand River Medical Society. Dr. Cofer is a native of Carbon-dale, Ill., received his preliminary education at the University of Illinois and his M.D. degree at the University of Missouri in 1967. He specializes in internal medicine and cardiology.

Bela Csaki, M.D., 6700 Troost, Kansas City, has become a member of Jackson County Medical Society. Dr. Csaki is a native of Jaszfenyszaru, Hungary, received his preliminary education at Jaszbereuyi Lehel Vesper Gymnasium and his M.D. degree at the University of Heidelberg in 1963. He specializes in thoracic and cardiovascular surgery.

Dale E. Darnell, M.D., 4320 Wornall Rd., Kansas City, has become a member of Jackson County Medical Society. Dr. Darnell is a native of Culver, Kan., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1959. He specializes in orthopedic surgery.

Raymond C. Doucette, M.D., 100 N. Euclid Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Doucette is a native of Lewiston, Me., received his preliminary education at Bowdoin College and his M.D. degree at McGill University in 1964. He specializes in obstetrics and gynecology.

Jerry E. Foote, M.D., 807 Stadium Rd., Columbia, has become a member of Boone County Medical Society. Dr. Foote is a native of Kansas City, received his preliminary education at Dartmouth College and his M.D. degree at the

University of Missouri in 1965. He specializes in dermatology.

Albert H. Gaines, M.D., 4900 Swope Parkway, Kansas City, has become a member of Jackson County Medical Society. Dr. Gaines is a native of Abington, Pa., received his preliminary education at Lincoln University and his M.D. degree at Meharry Medical College in 1965. He specializes in general surgery.

Lawrence J. Guidry, M.D., 6700 Troost, Kansas City, has become a member of Jackson County Medical Society. Dr. Guidry is a native of Rayne, La., received his preliminary education at the University of Southwest Louisiana and his M.D. degree at Louisiana State University in 1963. He specializes in urology.

John Hironimus, M.D., 6500 Chippewa, St. Louis, has become a member of St. Louis Medical Society. Dr. Hironimus is a native of New York, N. Y., received his preliminary education at Indiana University and his M.D. degree at Indiana University in 1961. He specializes in dermatology.

Staish K. Khurana, M.D., 3129 S. 8th, Kansas City, Kan., has become a member of Jackson County Medical Society. Dr. Khurana is a native of India, received his preliminary education at D.A.V. College and his M.D. degree at All-India Institute of Medical Sciences in 1965. He specializes in pediatrics.



"See what I mean when I say the doctor has a peculiar stance?"

Carl O. Knutson, M.D., Ellis Fischel State Cancer Hospital, Columbia, has become a member of Boone County Medical Society. Dr. Knutson is a native of Waukegan, Ill., received his preliminary education at Michigan State University and his M.D. degree at the University of Michigan in 1965. He specializes in general surgery.

Edilberto B. Lorenzo, M.D., 600 E. 22nd, Kansas City, has become a member of Jackson County Medical Society. Dr. Lorenzo is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1959. He specializes in psychiatry.

Bernard M. McGibbon, M.D., 14902 Pont Dr., Bridgeton, has become a member of St. Louis Medical Society. Dr. McGibbon is a native of London, England, received his preliminary education at Salesian College and his M.D. degree at Charing Cross Medical School in 1957. He specializes in plastic surgery.

Robert M. Maloney, M.D., 9770 Radio Dr., St. Louis, has become a member of St. Louis Medical Society. Dr. Maloney is a native of Dover, N. H., received his preliminary education at the University of New Hampshire and his M.D. degree at St. Louis University in 1964. He specializes in urology.

Louis C. Manuel, M.D., 4900 Swope Parkway, Kansas City, has become a member of Jackson County Medical Society. Dr. Manuel is a native of Cleveland, Ohio, received his preliminary education at Bowling Green State University and his M.D. at Meharry Medical College in 1965. He specializes in ophthalmology.

Diosdado L. Maranan, M.D., 1370 Jeffco Blvd., Arnold, has become a member of St. Louis Medical Society. Dr. Maranan is a native of Manila, Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1960. He is in general practice.

Ravinder B. Mehra, M.D., 2968 Lawton Pl., St. Louis, has become a member of St. Louis Medical Society. Dr. Mehra is a native of Lahore, West Pakistan, received his preliminary education at the University of Poona and his M.D. degree at B. J. Medical College in 1961. He specializes in internal medicine and cardiology.

Usha Mehra, M.D., 2968 Lawton Pl., St. Louis, has become a member of St. Louis Medical Society. Dr. Mehra is a native of Kohat, West Pakistan, received her preliminary education at the University of Poona and her M.D. degree at B. J. Medical College in 1962. She specializes in obstetrics and gynecology.

Byron A. Milgram, M.D., 601 E. 63rd, Kansas City, has become a member of Jackson County Medical Society. Dr. Milgram is a native of Kansas City, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1967. He specializes in psychiatry.

Adolph R. Mueller, Jr., M.D., Medical Arts Bldg., Joplin, has become a member of Jasper County Medical Society. Dr. Mueller is a native of St. Louis, received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1959. He specializes in orthopedic surgery.

Supote Phipatanakul, M.D., 135 W. Adams, St. Louis, has become a member of St. Louis County Medical Society. Dr. Phipatanakul is a native of Bangkok, Thailand, received his preliminary education at Chulalongkorn University and his M.D. degree at Chulalongkorn University in 1965. He specializes in otolaryngology and maxillofacial surgery.

Javier A. Pichardo, M.D., Farmington State Hospital, Farmington, has become a member of Mineral Area County Medical Society. Dr. Pichardo is a native of Camaguey, Cuba, received his preliminary education at Instituto Provincial De Camaguey and his M.D. degree at the University of Havana in 1941. He specializes in psychiatry.

Larry G. Piepergerdes, M.D., 807 Stadium Rd., Columbia, has become a member of Boone County Medical Society. Dr. Piepergerdes is a native of St. Joseph, received his preliminary education at Iowa State University and his M.D. degree at the University of Missouri in 1964. He specializes in ophthalmology.

Esperanza Pimentel, M.D., 6917 W. Florissant, St. Louis, has become a member of St. Louis County Medical Society. Dr. Pimentel is a native of Manila, Philippines, received his preliminary education at the University of the Philippines and his M.D. degree at the University of Santo Tomas in 1954. He is in general practice.

Young Wung Rhee, M.D., 1420 Grattan, St. Louis, has become a member of St. Louis Medical Society. Dr. Rhee is a native of Seoul, Korea, received his preliminary education at Seoul National University and his M.D. degree at Seoul National University in 1962. He specializes in child psychiatry.

Nitai C. Saha, M.D., 419 Couch Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Saha is a native of Kaijuri, East Pakistan, received his preliminary education at Calcutta University and his M.D. degree at Nilratan Sircar Medical College in 1963. He specializes in urology.

Abelardo B. Sanchez, M.D., 1781a Santa Blas Walk, St. Louis, has become a member of St. Louis Medical Society. Dr. Sanchez is a native of Cebu City, Philippines, and received his M.D. degree at the University of Santo Tomas in 1964. He specializes in neurology.

Hasan Dogan Savci, M.D., 1676 Rathford, St. Louis, has become a member of St. Louis Medical Society. Dr. Savci is a native of Salihli, Turkey, received his preliminary education at Iz-

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mir Ataturk Lisesi and his M.D. degree at Istanbul University in 1953. He specializes in radiology.

Gerald D. Seiden, M.D., 6700 Troost, Kansas City, has become a member of Jackson County Medical Society. Dr. Seiden is a native of Kansas City, received his preliminary education at the University of Missouri and his M.D. degree at the University of Tennessee in 1964. He specializes in otolaryngology.

Jess S. Simmons, Jr., M.D., 807 Stadium Rd., Columbia, has become a member of Boone County Medical Society. Dr. Simmons is a native of Albia, Iowa, received his preliminary education at Union College and his M.D. degree at Loma Linda University in 1963. He specializes in dermatology.

Marjorie S. Sirridge, M.D., 24th & Cherry, Kansas City, has become a member of Jackson County Medical Society. Dr. Sirridge is a native of Kingman, Kan., received her preliminary education at Kansas State University and her M.D. degree at the University of Kansas in 1944. She specializes in internal medicine (hematology).

William T. Sirridge, M.D., 24th & Cherry, Kansas City, has become a member of Jackson County Medical Society. Dr. Sirridge is a native of Kansas City, Kan., received his preliminary education at St. Louis University and his M.D.

degree at the University of Kansas in 1944. He specializes in internal medicine.

C. Ronald Stephen, M.D., Barnes Hospital Plaza, St. Louis, has become a member of St. Louis Medical Society. Dr. Stephen is a native of Montreal, Canada, received his preliminary education at McGill University and his M.D. degree at McGill University in 1940. He specializes in anesthesiology.

Raymundo Talaban, M.D., 950 Francis Pl., St. Louis, has become a member of St. Louis County Medical Society. Dr. Talaban is a native of Kabankalan, Philippines, received his preliminary education at Iloilo City, Philippines and his M.D. degree at Far Eastern University in 1960. He specializes in general surgery.

Robert W. Vaughan, M.D., Barnes Hospital Plaza, St. Louis, has become a member of St. Louis Medical Society. Dr. Vaughan is a native of Dallas, Tex., received his preliminary education at Southern Methodist University and his M.D. degree at the University of Texas in 1966. He specializes in anesthesiology.

Antonio P. Villarama, M.D., 8559 Ridge Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Villarama is a native of Manila, Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1959. He specializes in general surgery.

In Memoriam

Larkin, Rosemary R., M.D., St. Louis, a graduate of the University of Illinois, 1950; member St. Louis County Medical Society; age, 49; died July 1, 1971.

Hauptmann, Wm. L., M.D., St. Louis, a graduate of St. Louis University, 1951; member St. Louis County Medical Society; age, 43; died July 3, 1971.

Graeser, Richard G., M.D., St. Louis, a graduate of the University of Budapest, 1920; member St. Louis County Medical Society; age, 76; died July 12, 1971.

Magee, Charles D., M.D., St. Louis, a graduate of St. Louis University, 1925; member St. Louis County Medical Society; age, 78; died July 17, 1971.



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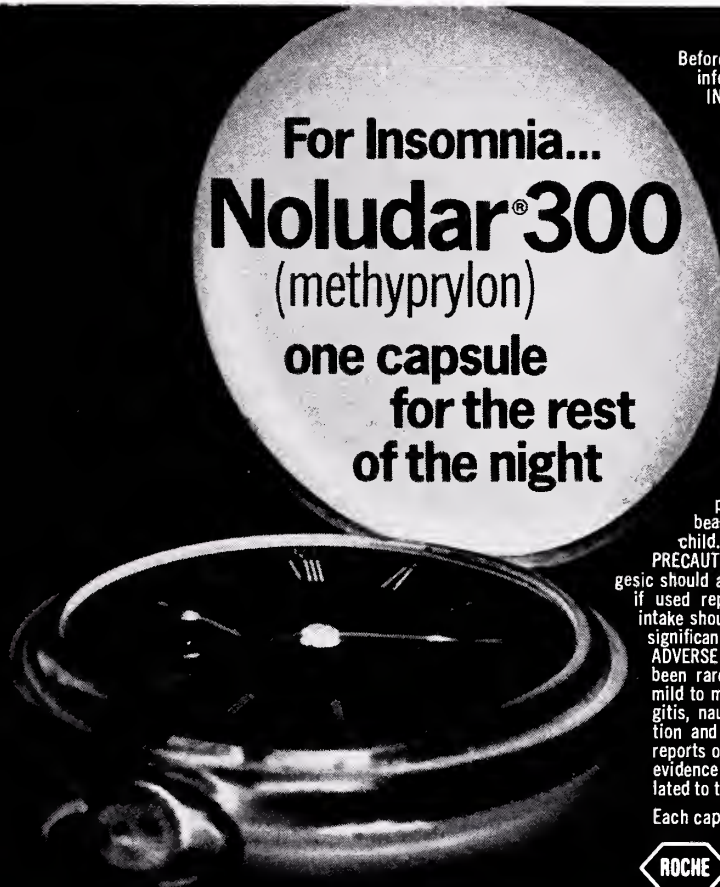
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Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of child-bearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

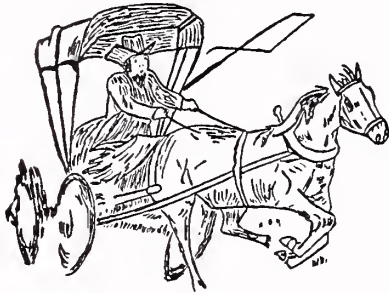
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

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Missouri Medicine in Review



FORTY YEARS AGO

Licenses to practice medicine were issued to 156 physicians by the Missouri State Board of Health on July 22. Ninety-two licenses went to St. Louisians and 14 to Kansas City physicians. Two women were among the licentiates: one was Dr. Thelma Ann Cotton, daughter of Dr. T. W. Cotton, Van Buren, President of the Missouri State Medical Association at the Hannibal session in 1929.

Twenty-eight nations signed a treaty limiting the production of habit-forming drugs to amounts needed for scientific and medical purposes at the eight-week International Conference recently at Geneva under the auspices of the League of Nations. Five of those countries signing were European countries which manufacture the drugs.

An international unit of measurement for radium and roentgen ray was adopted by the International Congress on Radiology which met in Paris, July 26-31. Adoption of the roentgen ray standard means that all nations represented at the Congress will use this unit of measurement which probably will ultimately be adopted by all nations. The standard unit was developed by Dr. Lauriston Taylor, Washington, D. C., physicist of the U. S. Bureau of Standards.

TWENTY-FIVE YEARS AGO

The State Board of Health no longer exists. This Board, which was established by the Legislature in 1883, successfully performed its various functions until July 1, 1946. The abolishment of the Board of Health by the Legislature this year

was made necessary by the newly-adopted Constitution of the state, which provides that all the boards, bureaus and commissions be consolidated into not more than 12 departments.

The Constitution further provided that the Legislature create a Department of Public Health and Welfare, which officially came into being on July 1, 1946. The Department comprises three major divisions: Division of Health, Division of Mental Diseases and Division of Welfare. The Division of Health has taken over the former duties of the State Board of Health with the exception of licensing of persons to practice medicine.

All licensing, including that of doctors of medicine, has been placed in the newly-created Department of Education where a Division of Registration and Examination has been established to act as a central clearing house for all persons who are required to secure a license to practice a profession.

TEN YEARS AGO

The American Urological Association has elected Grayson Carroll, M.D., St. Louis, as president-elect.—Byron M. Stuart, M.D., Boonville, was installed as president of the Boonville Lions Club at a dinner-dance meeting on June 29.

Dr. Daniel D. Klaff, St. Louis, will take part in a three-day workshop preceding the meeting of the American Rhinologic Society in Chicago on October 7.—The Independence Rotary Club recently installed Dr. Wallace R. Stacy as president.

Pattonsburg celebrated the opening of a new community-built clinic and the arrival of Dr. Larry Dowell on July 16.—On July 22, the Community Medical Center at Clarksville was dedicated and Edward K. Jackson, M.D. and Robert C. Gardaphe, D.D.S. were welcomed.

The Radiological Society of North America has elected Dr. John W. Walker, Kansas City, to its Board of Directors.

Trustees of the Independence Sanitarium and Hospital honored Drs. Charles H. Allen, John R. Green and Stanley L. Green at a luncheon and presented each with a resolution thanking him for his long years of service.

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114th MSMA Annual Session
April 6-9, 1972, Kansas City

Patients fell asleep quickly

Dalmane (flurazepam HCl) 30 mg reduced awake time—both before and after falling asleep - by fifty percent of pretreatment values in patients with insomnia.^{1,2}

Two sleep laboratory studies recently confirmed findings of earlier studies of this type, namely, that Dalmane 30 mg was effective in patients who had trouble falling asleep, staying asleep or both. One 30-mg capsule of Dalmane usually induced sleep within 22 minutes, decreased the number of awakenings and the wake time after the onset of sleep, and provided 7 to 8 hours of sleep without need to repeat dosage during the night.

These studies utilized identical protocols and included eight insomniac patients. Sleep laboratory measurements in a limited number of patients are derived from all-night electroencephalographic, electro-oculographic and electromyographic tracings. Unlike traditional methods of evaluation, they are quantitative, reproducible and projectable to large numbers of subjects.

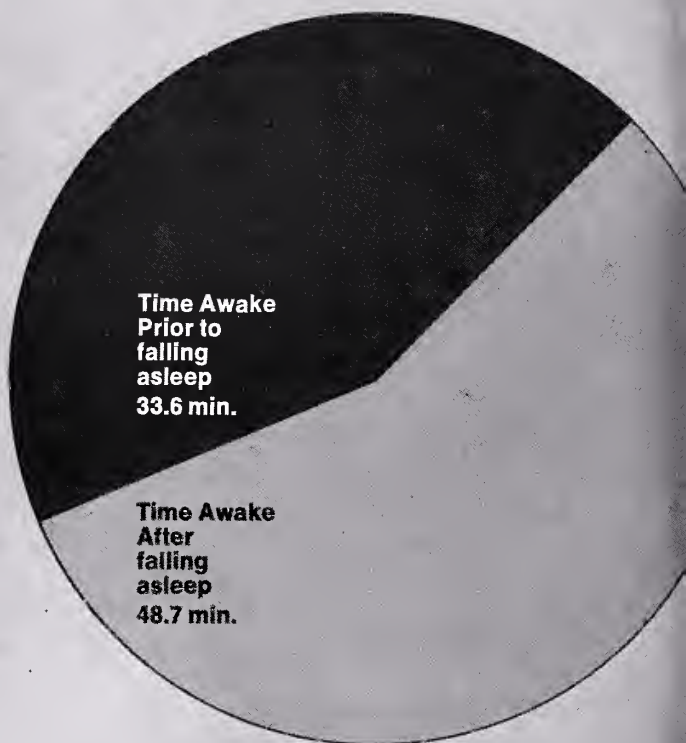
Results shown represent average values in all subjects for the three consecutive nights of placebo administration prior to Dalmane therapy and the seven consecutive nights on Dalmane 30 mg.

Dalmane is also relatively safe, as reported in clinical studies. Instances of morning "hang-over" have been relatively infrequent; paradoxical reactions (excitement) and hypotension have been rare. Dizziness, drowsiness, lightheadedness and the like were the side effects noted most frequently, particularly in the elderly or debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

References: 1. Frost, J. D., Jr.: "A System for Automatically Analyzing Sleep," Scientific Exhibit presented at Clinical Convention, A.M.A., Boston, Nov. 29-Dec. 2, 1970, and Aerospace M.A., Houston, April 26-29, 1971.

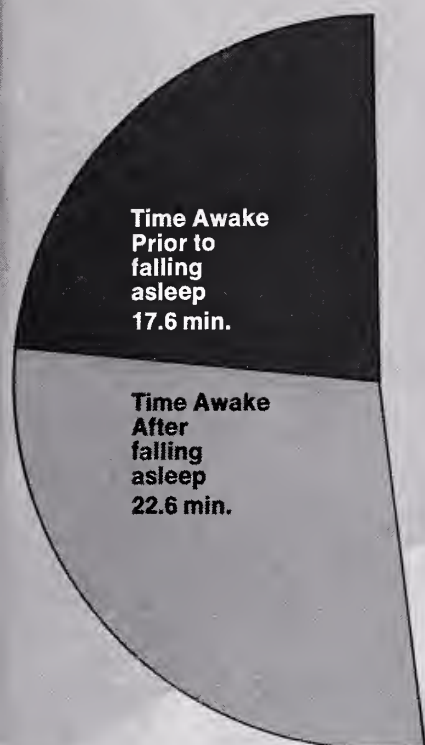
2. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley, N.J.

Before
Dalmane
(flurazepam HCl)



and slept through the night

On
Dalmane
(flurazepam HCl)



average sleep laboratory measurements in cited studies

parameter	Before Dalmane	On Dalmane
Time required to fall asleep	33.6 min.	17.6 min.
Time awake after onset of sleep	48.7 min.	22.6 min.
Number of wakeful periods after onset of sleep	12.2	8.4
Total sleep time	420.0 min.	447.5 min.
Total sleep percent	88.6	94.5

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Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

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MSMA Supports Water Pollution Bonds

The Council of the Missouri State Medical Association, meeting September 18 and 19 in St. Louis adopted a resolution supporting Proposition No. 3 to be voted upon by Missouri voters at a special election on Tuesday, October 5, 1971.

Proposition No. 3 is a \$150 million bond issue that is designed to assist cities, counties, and sewer districts in abating water pollution in the state of Missouri. This bond issue would generate \$600 million in local, state and federal funds for construction of sewer treatment plants, interceptor sewers and outfall system; and will be paid for from general revenue.

The Missouri Water Pollution Board will establish priorities for the administration of the funds if the bond issue passes. Thomas J. Fischer, M.D., Hannibal, is the Chairman of the Missouri Water Pollution Board.

Support of Proposition No. 3 by the Missouri State Medical Association was recommended by the Commission on Public Affairs and the Commission's ad hoc Committee on Environmental Health. Richard P. Bowles, M.D., Liberty, is chairman of the Public Affairs Commission; Arthur W. Neilson, M.D., St. Louis, is chairman of the ad hoc Committee on Environmental Health.

The resolution as adopted by the MSMA Council is as follows:

RESOLUTION

WHEREAS clean, potable water is necessary for human life, and

WHEREAS throughout Missouri our water supplies are increasingly being polluted by industrial waste, human and animal waste, and agricultural fertilizers and poisons, and

WHEREAS an opportunity is being presented to the people of

Missouri to solve this problem by voting "YES" on Proposition 3 on October 5, 1971, in support of a plan to save millions of dollars in assisting counties, cities, and metropolitan sewer districts in abating water pollution in the State of Missouri, and

WHEREAS contaminated, polluted water, which has been cleansed only partially before reused in many communities, is a carrier of disease organisms, which may cause a va-

riety of diseases in a user of this water,

THEREFORE, BE IT RESOLVED that the Missouri State Medical Association, on the advice of its Commission on Public Affairs and its ad hoc Committee on Environmental Health, hereby supports Proposition 3 to the fullest. Clean water in the State of Missouri is a medical necessity, and passage of Proposition 3 will expedite steps toward bringing about a healthier citizenry in the state.

HMO Concept (Continued)

that would have been incurred by Medicare under conventional reimbursement methods.

Under S. 1182 (and HR 5615) the Secretary of HEW would be authorized to make grants or contracts with HMO's to assist them in planning for the development or expansion of an HMO, and to pay for all or part of the initial operating costs which are incurred as a result of its operation in a medically underserved area. Loan guarantees could be made for the establishment of private HMO's for the provision of new or expanded health services, and could cover construction of outpatient or other ambulatory facilities. Loans could be made directly to public HMO's to meet their initial operating costs incurred as a result of operation in a medically underserved area. In issuing both planning grants and loan guarantees, the Secretary of HEW is instructed to give priority to applicants which will provide new or expanded health services to medically underserved areas.

Federal law is usually broad and the HMO bills are no exception. Until specific regulations

on HMO's are issued by HEW we cannot accurately predict whether or not the HMO concept will actually meet the Administration's expectations or better serve the needs of our patients. Federal officials, however, have stated that by 1980, 90% of the entire population of the nation should have available to them an HMO as an alternative to the currently available means of receiving health care, and that approximately 25% of the population should have elected to belong to an HMO.

DATES TO REMEMBER

January 29-30, 1972 — Public Affairs Conference — Columbia

April 6-9, 1972 — 114th Annual Session of MSMA — Kansas City

MSMA
News

HMO Concept In Several Bills Before Congress

(Editor's Note: The House of Delegates of the Missouri State Medical Association, meeting in April of this year, directed that the Association engage in an active educational program to disseminate all available information on Health Maintenance Organizations and other health care delivery systems to the medical profession and the public. The following article is the first in a series on the history and background of pending legislation, as well as pros and cons of the Health Maintenance Organization approach. The material was prepared by the California Medical Association and published in a special issue of the CMA News.)

HMO's Past and Present

In the 91st Session of Congress the "Social Security Amendments of 1970," which included a section calling for the creation of Health Maintenance Organizations was introduced. This bill (HR 17550) passed the House, and portions of it were amended by the Senate. It was referred to a joint conference committee drawn from the Senate Finance Committee and the House Ways and Means Committee. Time did not permit the conferences to resolve the differences, so HR 17550 "died" with the adjournment of the 91st Congress.

The first bill to be introduced in the current Congressional Session was HR 1 — this year's equivalent of HR 17550. This bill reiterated the Health Maintenance Organization concept; its introduction was followed by President Nixon's National Health Message in which considerable emphasis was placed on the development of HMO's as a means of solving some of our national health care delivery and financing problems. The stated

premises for development of the concept were: (a) more competition in the health field is needed; (b) economies can be effected by the further development of group and other types of prepayment practice; and (c) better manpower and facility utilization, coupled with some type of incentive approach, will make available to the public wider choice of how and where they individually will receive medical care.

The Administration has also caused introduction of another bill, S. 1182 (and its companion bill, HR 5615) which further defines the concept. This bill, like HR 1, outlines the Health Maintenance concept as a broad approach designed to encompass variable types of health care provider arrangements. The bill also spells out some specific necessary components which eligible organizations (e.g. providers, hospitals [including Veterans Administration], medical schools, the "Blues," OEO Neighborhood Health Centers, County Society Foundations for Medical Care, and other public or private organizations) must meet in order to qualify as an HMO. According to the language of the bills, an HMO must:

a. Provide (either directly or through arrangements with others) health services to individuals enrolled on a per capita prepayment basis;

b. Provide (either directly or through arrangements with others) all those health services which a defined population might reasonably require in order to be maintained in good health, including as a minimum: emergency care, in-patient hospital and physician care, ambulatory physician care, and out-patient preventive medical services;

c. Provide physicians' services

directly through physicians who are either employees or partners of the HMO or under arrangements with one or more groups of physicians (organized on a group or individual practice basis) under which each group is reimbursed for its services primarily on the basis of an aggregate fixed sum or on a per capita basis, regardless of whether the individual physician members of the group are paid on a fee-for-service or other basis;

d. Demonstrate proof of financial responsibility and capability of providing comprehensive health care services, including institutional services — efficiently, effectively and economically;

e. Have arrangements for assuring that the health services required by its members are received promptly and appropriately, meeting quality standards established in accordance with regulations of the Secretary of HEW;

f. Have an open enrollment period at least every year under which individuals are accepted in the order in which they apply, up to the limits of its capacity and without restrictions except those authorized by HEW (at least half of the enrollees must be under age 65);

g. Agree to keep all records and make all reports required by the Secretary of HEW; and

h. Have assured that the State Comprehensive Health Planning Council and the local health planning agency (if any) have had an opportunity to comment on the application.

It should be noted that the HMO is envisioned as the organizational framework in which Medicare beneficiaries can be enrolled with payment made for them at a level of 95% of the estimated and adjusted amount (Continued on Other Side of Page)

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Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—they can both cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triam-

terene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Anti-hypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

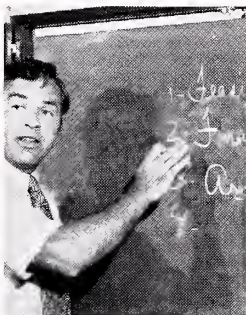
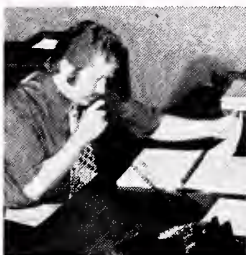
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Versapen[®]
(hetacillin)

Once in the patient's body, it rapidly hydrolyzes into ampicillin.

**IS
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JUST AN
AMPICILLIN?**

Extensive clinical experience has shown that this ampicillin derivative offers unique advantages over the ampicillin you may be presently prescribing:

1/ A uniform adult and a uniform pediatric dosage in all mild-to-moderate infections due to susceptible organisms—respiratory, genitourinary, G.I., skin and soft tissue.

Adults: 225 mg. q.i.d.

Children: 10 mg./lb./day in 4 equally divided doses.

The recommended dosage for Versapen (hetacillin) does not depend on site of infection, but on severity. Therefore, in mild-to-moderate infections due to susceptible organisms, you can prescribe Versapen (hetacillin) for the genitourinary tract at the same dose recommended for the respiratory tract. Or any other infection site.

2/ A low dosage for mild-to-moderate genitourinary infections due to susceptible organisms.

3/ A low dosage for mild-to-moderate pediatric infections due to susceptible organisms.

4/ Parenteral forms remain stable up to six hours after reconstitution with sterile water ...longer than any ampicillin.

5/ Lower patient cost. Inherent with lower dosages for many indications is the benefit of lower cost to the patient. And, in these many instances, Versapen is significantly more economical to the patient than ampicillin brands.

Side Effects. As with any penicillin serious allergic reactions, including anaphylaxis, can occur. The type of side effects most frequently encountered are the same as with ampicillin, namely: diarrhea, loose stools, rash and nausea.

Please see next page for brief summary of prescribing information.

BRISTOL

Versapen® (hetacillin)

Versapen®-K (potassium hetacillin)

■ Versatile dosage forms...for all patients...of all ages. ■ A uniform adult and a uniform pediatric dosage for all susceptible mild-to-moderate infections...respiratory, genitourinary, G.I., skin and soft tissue. Recommended dosage varies with severity, not site, of infection. ■ Parenteral forms remain stable up to six hours after reconstitution with sterile water...longer than any ampicillin. ■ Economical therapy.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

(A) 12/28/70

For complete information, consult Official Package Circular.

Actions: Hetacillin provides bactericidal levels of ampicillin but has no antibacterial activity itself. It hydrolyzes to ampicillin and has a half-life of 20 minutes at pH 7.1.

Indications: Hetacillin is indicated in the treatment of susceptible strains of the following organisms in the diseases listed. Bacteriology studies to determine the causative organisms and their sensitivity should be performed. Therapy may be instituted prior to obtaining results of sensitivity testing.

Group A beta-hemolytic *Streptococcus*: Tonsillitis, pharyngitis, otitis media, skin and soft tissue infections.

Diplococcus pneumoniae: Broncho- and lobar pneumonia, otitis media.

Nonpenicillinase-producing *Staphylococcus aureus*: skin and soft tissue infections, otitis media.

H. influenzae: Bronchitis and bronchopneumonia.

Escherichia coli: Cystitis, pyelonephritis, prostatitis/urethritis, skin and soft tissue infections.

Proteus mirabilis: Cystitis, pyelonephritis, skin and soft tissue infections.

Enterococcus (Streptococcus faecalis): Cystitis, pyelonephritis, prostatitis/urethritis.

Shigella species: Shigellosis.

Salmonella species: Salmonellosis (parenteral only).

Indicated surgical procedures should be performed.

Use parenteral drug only in severe infections or in patients unable to take oral medications.

Contraindications: A history of allergic reactions to penicillins or lidocaine.

Warning: Anaphylaxis may occur, particularly after parenteral administration and especially in patients with an allergic diathesis. Check for a history of allergy to penicillins, cephalosporins or other allergens. If an allergic or anaphylactic reaction occurs, discontinue hetacillin and institute appropriate treatment.

Usage in Pregnancy: Safety for use in pregnancy is not established.

Precautions: Mycotic or bacterial superinfections may occur. Assess renal, hepatic and hematopoietic function periodically during long-term therapy. Because intravenous administration of potassium hetacillin in doses in excess of 5 mg./Kg. has been noted to enhance the vasopressor effect of epinephrine in dogs, precautions should be taken with patients receiving epinephrine concurrently.

Adverse Reactions: Untoward reactions include: Glossitis, stomatitis, black "hairy" tongue, nausea, vomiting and diarrhea, skin rashes, urticaria, exfoliative dermatitis, erythema multiforme and anaphylaxis (usually with parenteral administration). Anemia, thrombocytopenia, thrombocytopenic purpura, eosinophilia, leukopenia, and agranulocytosis have been noted, are usually reversible and are believed to be hypersensitivity phenomena.

Elevations in one or more liver function tests have been reported without any evidence of hepatic toxicity.

Local reactions: Thrombophlebitis at the site of intravenous injection has been reported.

Usual Dosage: Patients weighing 90 lbs. or more: 225 mg. q.i.d. Patients weighing less than 90 lbs.: 2.5 mg./lb. q.i.d.

Group A beta-hemolytic streptococcal infections should be treated for at least 10 days. Administer oral preparations in a fasting state to insure maximum absorption.

Recommended dosages (expressed in terms of ampicillin activity) in susceptible mild-to-moderate infections*

Versapen® (hetacillin) 112.5 mg.	Chewable Tablets	Usual pediatric dosage: 10 mg./lb./day in 4 equally divided doses. For a 45 lb. child: one tablet q.i.d.
	Oral Suspension (112.5 mg./5 ml.)	Usual pediatric dosage: 10 mg./lb./day in 4 equally divided doses. For a 45 lb. child: 1 tsp. q.i.d. Available in 40 ml., 80 ml., and new 100 ml. bottles.
	Pediatric Drops (112.5 mg./ml.)	Usual dosage: 10 mg./lb./day in 4 equally divided doses. For a 10 lb. child: ¼ dropper q.i.d. Available in 10 ml. bottles.
Versapen®-K (potassium hetacillin) 225 mg.	Capsules	Usual adult dosage: one 225 mg. capsule q.i.d.
	I.V. I.M. with Lidocaine HCl (20 mg./vial)	For patients weighing 90 lbs. or more: 225 mg. q.i.d. For patients weighing less than 90 lbs.: 10 mg./lb./day in 4 equally divided doses.

*For severe infections—Adults: 450 mg. q.i.d. Children up to 90 lbs.: 20 mg./lb./day in 4 equally divided doses.

Very serious infections may require very high doses and prolonged therapy.

Note: Versapen® has been issued Patent No. 3198804.

BRISTOL

BRISTOL LABORATORIES/Division of Bristol-Myers Company/Syracuse, New York 13201

Physicians Told to Show People They Care at Recent AMA Communications Clinic

America's physicians must let people know that "We give a damn" about them and about our nation, Frank D. Campion, Director of the American Medical Association Communications Division, told those attending the AMA Communications Clinic in Chicago on August 16.

Campion pointed out that the clinic was instituted for the exchange of ideas, to stimulate thinking and, at the same time, to reassess present programs. He said that the AMA is stressing the positive, the things which are being done to show people that America's physicians do care.

The AMA communicator said that the medical association in the past took the initiative to push for better care of the American people and that today the AMA is again taking the initiative.

The talk by Campion followed a short welcome by Ernest B. Howard, M.D., Executive Vice-President of the AMA, who also stressed that the AMA's working on positive programs and needs to let the American people know about these programs.

Doctor Howard was high in praise of an article by *New York Times* writer Harry Schwartz in the August 14 issue of the magazine, "Saturday Review of Literature," entitled: "Health Care in America: A Heretical Diagnosis." Doctor Howard said that the article was the best one he had read on the subject and commended it to all in attendance.

The AMA's chief executive officer said that many problems do face the AMA and America's physicians. He foresees a clash concerning physician-hospital relations, relations which may be worsened by the introduction in Congress of the proposed Ameriplan Health Insurance program of the American Hospital Association which Doctor Howard said, calls for a federalized system of health care.

Doctor Howard also decried the division of opinion within the AMA, pointing out that we have already lost the far left and now the radical right appears to be seeking to divide the organization by attacking the trustworthiness of AMA leadership.

A panel discussion followed on the subject, "Responding to Criticism."

Moderator Walter H. Johnson, Board Chairman of Myers-Infoplan International, Inc., said

that it is not surprising that medicine is under attack because all of the institutions of America are being challenged. He said that our best defense is a campaign to show our affirmative programs.

Elaine Walster, Ph.D., Department of Sociology, University of Wisconsin, said that when public relations people are representing an organization, their job is to sell a policy of the organization and to work on attitude changes concerning these policies. In answering criticism, she said that you must decide if it is valid. Valid criticism should be answered with a positive program. One way to answer criticism is the disarming idea of admitting wrong and expressing plans to try to do better.

Dorothy Loeb also of the University of Wisconsin, said that it is hard for physicians to design a program to reach drug users and others because the best communications is on a basis of equality. People tend to associate with people like themselves. She saw this as a strength of chiropractors who, she said, talk to people in a way that they can understand—something, she said that busy doctors of medicine do not do as well as they should.

Douglas Timberlake, Regional Public Relations Manager for United Airlines, said that in a corporation, a public relations man does not follow the party line and can be unpopular. But it is up to him to see that those who make decisions realize what these decisions mean to the public. No longer can a profit motive be the only issue in corporate decisions. Advocacy journalism of the type which killed the supersonic transport has brought the public into corporate decisions.

James Wolf, president of a public relations firm, said that it is a basic public relations responsibility to tell the truth. A former press secretary to Governor Kirk of Florida, Wolf told those in attendance that politicians and those in political office must be prepared to answer criticism constantly and the best way to do it is head on.

Frank Farone of General Motors Corporation said that his corporation learned during the Nader situation how not to handle criticism. But he said that since then, the posture and mood of General Motors has changed and it is seeking to

meet the needs of people. He said that PR people have the duty of conveying information concerning changing public moods to their corporate officers. He also said he believed criticism can best be handled at the local level and that it is best to have many voices to answer criticism if those speaking are educated on the subject.

Charles Marshall of Illinois Bell said that PR people must be aware of what may be coming and ready to respond. He said that in some cases it might be better to tell of your own faults before someone else does. Such a revelation makes you seem more human and people like it. It can even help build creditability.

In closing, the panel covered several points including: It is sometimes well to bring critics into decision-making process as well as to recognize that criticism can be a good thing and make an organization even stronger; criticism does not necessarily show what is right or wrong but, rather, what someone thinks.

The next session dealt with the subject of radio and television coverage. Richard M. DuMont, Director of the Radio, TV and Motion Picture Department of AMA told those in attendance that with the new FCC policy of returning prime time each night to local TV stations, there should be a new market for good local TV presentations. He also said that the recently initiated AMA news tape service available to radio and TV stations on a free basis has proven most popular and is receiving wide use in the nation.

Dan Price, host of a popular radio show in Chicago, said that those in medicine should be prepared to act quickly in the face of criticism. He urged all units of medicine to have their own spokesman and to keep him informed of what's going on and as prepared as possible to answer criticism. He urged the facing of unpleasant issues with disarming candor and affability while agreeing to try and change things if such change is warranted. If a decision is made that there will be no comment on certain criticism, then all of those in the organization should be aware of this decision and stand by the decision.

Price said that it is important to know TV and radio announcers but public relations people should get to know news directors, producers and general managers, too. He also said that a good TV interview takes time, and he urged those who have set up the interview to leave the interviewee alone once it is time to film or tape the interview since such interference angers the newsmen.

Robert Hahn, director of Radio-TV for the California Medical Association, said that most medical groups are underutilizing television. He said that California has made its own TV films in both the feature- and issue-oriented fields. He showed short feature films made by his department as well as two issue-oriented films concerning Medicaid in his state. Cost of such films for California ran from \$1,300 to \$2,000 each. At the same time, he said that many TV stations will make their own film if you can sell them on an idea for a good program.

Dane S. Wert, director of medical communications for the Pennsylvania Medical Society, moderated a panel concerning working with the press. Two representatives of the working press participated and complained of difficulties in getting medical information when they need it. They also said that physicians should want to speak on subjects such as VD and drug abuse. They stated that although they hear of doctor-criticism of the press, they find too few doctors willing to communicate with the press.

During a noon luncheon, Congressman Jerry L. Pettis of California, a former medical society executive, said that the AMA has a much improved image in Washington, thanks to AMPAC and to a more positive stance concerning legislation. He said that he does not expect a national health insurance plan to be passed by Congress this year.

After a series of workshop sessions, a program was presented on speech writing and speech making. Eddie Miller, who writes speeches for AMA officials, said that speech writing is an art form in itself. He said that most doctors don't think in terms of speeches but, rather, "present a paper." He said that speeches even when they are to be published, should be written for the audience. A speech should be written to single human beings and a good speech writer learns to hear a manuscript as well as to read it. Words and phrases of importance should be repeated in speeches for emphasis. He said that speeches should be made easy to read. Sentences should stand alone. Speech writers should avoid bad word combinations and sentences should be short and of balanced length.

Among things to avoid during speeches are speaking too quietly, keeping eyes on paper and not looking at audience, having too many distracting mannerisms and speaking in a dull monotone.

An effort should be made to prepare speakers to answer embarrassing questions. Sometimes a question back to an antagonist can change the tide in favor of the speaker.

On Tuesday morning, the session opened with a discussion of the AMA Special Communications Program.

Paul Foley, President of Interpublic, Inc., said that advertising is persuasion. He said advertising is a highly personal activity on a person-to-person basis. He said that agencies, such as his, have to make decisions concerning advertising messages, when to use them, how to use them and where to use them. In making these decisions, the agency uses certain measurements which he admitted were part of an imprecise art. He said that a personalized advertisement can give a faceless corporation or association a personality. To make his point, he showed several filmed American Railroad Association commercials featuring former Astronaut Wally Schirra. He said that the railroad's Schirra messages had made it easier to later run hard-hitting advertisement against strikes by rail unions.

Mr. Foley said that his agency had studied the AMA situation and decided that since people think well of their own personal physicians, it would be important to personalize the AMA—thus the use of the expression “America's Doctors of Medicine” with the same aim as the Railroad Association's use of Schirra.

The decision was made for the AMA communications campaign to get across the idea to the public that America's physicians are concerned about their patients and about public issues. This would set the stage for a campaign to ask for help if it is needed.

It was pointed out that the agency made decisions concerning which newspapers, TV stations and magazines to use based on the money available and in an attempt to reach as many people as possible.

Questions from the audience concerning a possible wider use of advertisements in additional cities brought the answer that such a program had been considered but at this time the money is not available. It is possible that at a later date the AMA might participate in the sponsorship of additional advertisements in new areas if local state and county societies share part of the cost. No decision has been made on this matter.

The final program at the Conference concerned

active drug abuse programs.

Marlin Dearden, coordinator of drug education at Derby, Conn., said that the drug education program in his area started with a survey of physicians which pointed up the problem in the area and also showed that most physicians knew little about solutions to the drug problems. The survey results emphasized the drug problem in the area and led to support for the drug project. The program works in the schools to educate both teachers and pupils about the drug problem. Group discussion among teachers and students has proved important in combatting drug abuse. An effort has also been made to train teachers in human relations and better understanding of their pupils.

Patricia Hill of the California Department of Education said that the California Medical Association helped to set up the Interagency Council on Drug Abuse which has brought all of those agencies working in the field under one coordinating group. Five task forces originally worked under the program in the fields of treatment, research, education, legislation and administration of justice. Later, a task force for Youth was added. All of the task forces have been busy. She also mentioned that Santa Clara County Medical Society has been working in the field of educating physicians concerning drugs and the program there is working well.

Perhaps the busiest and most successful drug abuse program is in Phoenix, Ariz. where CODAC is working in a number of ways to educate people against the use of drugs as well as to treat those who have already used them. Physicians in the Phoenix area supplied the leadership for CODAC and many physicians are very active in the continuing program, according to Merlin W. Kampfer, M.D., Phoenix, President of CODAC.

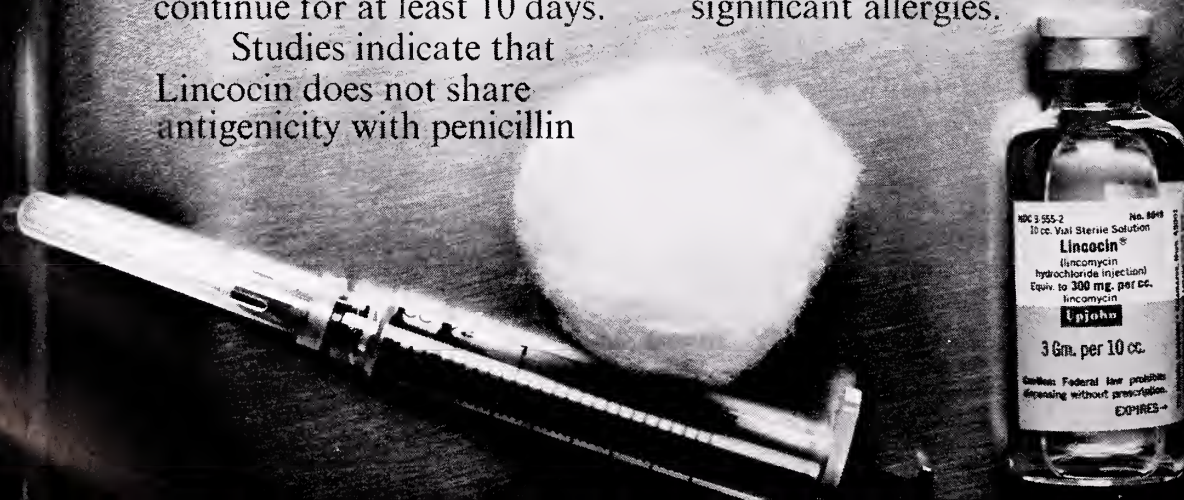
Doctor Kampfer said that the program was initiated after a medical society meeting for doctors and wives at which students from the area's schools said that 30% of the high school students in the area were on pot or speed and another 30% had at least experimented with drugs. The severity of the problem was brought home to physicians at this time and the result was the founding of CODAC which is now the principal agency in the drug abuse field in the Phoenix area.

Hypersensitivity to penicillin is a good reason to consider Lincocin® (lincomycin hydrochloride)

Lincocin (lincomycin hydrochloride, Upjohn) has produced a high percentage of satisfactory responses in patients with mild, moderate and severe infections due to susceptible streptococci, pneumococci and staphylococci (including many penicillinase-producing strains). With β -hemolytic streptococcal infections, treatment should continue for at least 10 days.

Studies indicate that Lincocin does not share antigenicity with penicillin

compounds. However, hypersensitivity reactions such as angioneurotic edema, serum sickness and anaphylaxis have been reported, some of these in patients known to be sensitive to penicillin. As with any antibiotic, Lincocin (lincomycin hydrochloride, Upjohn) should be used cautiously in patients with histories of asthma or other significant allergies.



So is penicillin-resistant staph.

Lincocin (lincomycin hydrochloride, Upjohn) has been demonstrated to be effective in susceptible penicillinase-producing staphylococcal infections resistant to penicillin (including ampicillin). However, resistant staphylococcal strains have been recovered; resistance appears to occur in a slow stepwise manner. As with

all antibiotics, susceptibility studies should be performed.

Intramuscular and intravenous injections of Lincocin (lincomycin hydrochloride, Upjohn) are generally well tolerated. Instances of hypotension following parenteral administration have been reported, particularly after too rapid intravenous administration.

Sterile Solution (300 mg. per ml.) **Lincocin[®]** (lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.



Sterile Solution (300 mg. per ml.)

Lincocin[®]

(lincomycin hydrochloride, Upjohn)
for respiratory tract, skin, soft-tissue, and
bone infections due to susceptible
streptococci, pneumococci, and staphylococci

Each preparation contains: Lincomycin hydrochloride monohydrate equivalent to lincomycin base

250 mg. Pediatric Capsule 250 mg.
500 mg. Capsule 500 mg.
*Sterile Solution per 1 ml. 300 mg.
Syrup per 5 ml. 250 mg.
*Contains also: Benzyl Alcohol 9 mg.; and,
Water for Injection—q.s.

An antibiotic chemically distinct from others available, indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed.

CONTRAINDICATIONS: History of prior hypersensitivity to Lincocin (lincomycin hydrochloride). Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: Cases of severe and persistent diarrhea have been reported and at times drug discontinuance has been necessary. This diarrhea has been occasionally associated with blood and mucus and at times has resulted in acute colitis. This reaction usually has been associated with oral therapy, but occasionally has been reported following parenteral therapy. Although cross sensitivity to other antibiotics has not been demonstrated, make careful inquiry concerning previous allergies or sensitivities to drugs. Safety for use in pregnancy has not been established and Lincocin is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or

significant allergies. Overgrowth of non-susceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β -hemolytic streptococci infection for ten days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angio-neurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatment. *Skin and mucous membranes*—Skin rashes, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances.

Cardiovascular—Instances of hypotension following parenteral administration have been reported, particularly after too rapid I.V. administration. Rare instances of cardiopulmonary arrest have been reported after too rapid I.V. administration. If 4.0 grams or more administered I.V., dilute in 500 ml. of fluid and administer no faster than 100 ml. per hour. **Local reactions**—Excellent local tolerance demonstrated to intramuscularly administered Lincocin. Reports of pain following injection have been infrequent. Intravenous administration of Lincocin in 250 to 500 ml. of 5% glucose in distilled water or normal saline has produced no local irritation or phlebitis.

HOW SUPPLIED: 250 mg. and 500 mg. Capsules—bottles of 24 and 100.

Sterile Solution, 300 mg. per ml.—2 and 10 ml. vials and 2 ml. syringe.

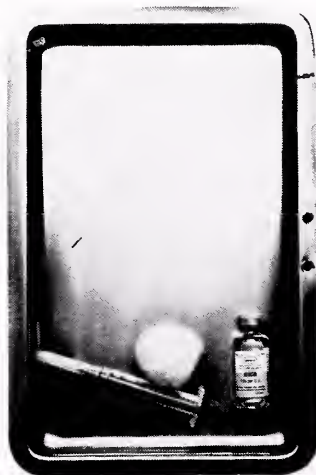
Syrup, 250 mg. per 5 ml.—60 ml. and pint bottles.

For additional product information, consult the package insert or see your Upjohn representative.

JA71-1203 MED B-5-SR (KZL-6)

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Voluntary Health Agencies in Missouri

Part II. Characteristics of Board Members

VOLUNTARY HEALTH AND WELFARE AGENCIES are strongly identified with improving the health of the people of the United States. Currently, more than 100,000 of these agencies on the national, state and local levels seek contributions from the general public. The general organizational pattern is for each agency to have a board of directors which ranges from six to 100 or more members. Thus, an estimated 1.5 million to 2 million citizens, including physicians, contribute their time, effort, knowledge and money to these organizations by serving as board members. According to Hamlin,¹ "Voluntary health and welfare agencies in the United States have been a principal means of raising the level of society's well-being by channeling into effective action the energies and goodwill of countless Americans—contributors, volunteers, officers and staff members."

Although there have been several studies of voluntary health agencies from the standpoint of their national organizations,¹⁻⁴ until recently there had not been an in-depth study of voluntary health agencies as they operate in an individual state. Hoban, Dawdy and Parrish⁵ reported a study of eight voluntary health agencies in Missouri. They depicted the general organization, staffing patterns, budgetary allocations and service activities of these voluntary health agencies. The heart of the voluntary agency is its voluntary leadership, especially the board of directors.

The purpose of this second report on voluntary health agencies in Missouri is to tell about the people who serve on the boards of directors. Who are the board members? What are their educational backgrounds? Where do they live? What are their occupations? Why do they provide this type of community leadership without compensation? We believe that the information provided in this study will prove of interest to physicians, voluntary health agency executives, board members and volunteers and to the general public.

MATERIALS AND METHODS

In this study of voluntary health agencies in Missouri the board members of the following eight agencies were selected for study: American Cancer Society, Missouri Division, Inc.; United Cerebral Palsy of Missouri, Inc.; Missouri Heart Association, Inc.; Missouri Society for Crippled Children and Adults, Inc.; The Missouri Association for Mental Health, Inc.; National Multiple Sclerosis Society; Muscular Dystrophy Associations of America, Inc.; and Missouri Tuberculosis and Respiratory Disease Association. The reasons for selecting these particular voluntary health agencies were that each of these agencies ranks in the top ten voluntary health agencies in Missouri (based on annual income); each agency is affiliated with a national agency which, in turn, is a member of the National Health Council; each agency has one or more administrative offices in Missouri; each agency has an Executive Director; and each agency has a Board of Directors.

The executive director of each agency was interviewed by a member of the study team. During the interview, the questionnaire to be mailed to individual board members was explained as was the purpose of the study. Seven of the eight health agencies provided a list of their current board of directors. One agency has a national policy against this practice, but its board of directors was listed on the agency letterhead stationery.

A questionnaire was mailed to board members along with a cover letter explaining the purpose of the study and a stamped, self-addressed return envelope. Each board member was assured that no agency or individual would be identified by name in the study. If the questionnaire was not returned within two weeks, a follow-up questionnaire was mailed to the board member.

The questionnaire was designed to elicit the following information about board members of voluntary health agencies: name; age; sex; city

Voluntary health and welfare agencies have become an institution in the United States. The backbone of these non-profit organizations are their volunteers, especially their unpaid board of directors. Part II of this study of voluntary health agencies in Missouri describes who the board members are, their interests and their motivations. Part I of this study was published in the January, 1970 issue of *MISSOURI MEDICINE*.

At the time of this study, Mr. Dawdy and Mr. Hoban were with the American Cancer Society, Missouri Division, Inc. Doctor Parrish was a Professor of Community Health in the School of Medicine and Mrs. Parrish was an Instructor in the School of Nursing, University of Missouri-Columbia. Doctor Parrish is now Vice-President for Health Affairs of the University of South Dakota, Vermillion, S. D.

of residence; occupation; highest educational experience; name of the voluntary health agency represented; number of years on the Board of Directors; previous experience as a volunteer; factors motivating the individual to become a board member; relative interest in various functions of the agency; and memberships in other civic, social and fraternal organizations.

Data recorded on the individual questionnaires were summarized by means of hand tabulation on a master sheet. In order to maintain confidentiality, a table of random numbers was used to assign each agency a code letter, i.e., A, B, C, D, etc. The same code letter was used to identify an agency in the current study that was used in the previous study of the general operation of these voluntary health agencies in Missouri.⁵

HEALTH AGENCIES

So that the data about board members reported in this study would be more meaningful, it seemed worthwhile to summarize some basic information about the Missouri voluntary agencies.⁵ Ranking the agencies according to annual income one finds G in the lead followed by H, B, F, A, C, E and D. When ranked according to size of total state and local staff members, again G is in the lead and is followed by H, A, B, D, F, C and E. Number of local chapters or units is another measure of organizational activity. G ranked first with 114 chapters, followed by A, D, B, F, C, H and E with only two chapters. If

one judges the success of voluntary health agencies in Missouri by the amount of funds they raise annually, then the most successful agencies (G, H, and B) have relatively large professional staffs. When one studies all eight agencies, it is rather surprising that fund raising success is not better correlated with the number of local chapters an agency operates. However, agency G which leads in fund raising has the largest number of local chapters.

RESULTS

Size of Board. According to the lists of active board members provided by the executive directors of these health agencies, the size of the board of directors varied by agency: A = 87 members, B = 45 members, C = 10, D = 52, E = 24, F = 18, G = 72 and H = 24. The average number of board members was 42. In a few instances, the number of board members for an agency was under-reported owing to unfilled vacancies created by a member retiring, moving out-of-state or dying. The three agencies that were most successful in fund raising had the following number of board members: G = 72 members, H = 24 members and B = 45 members.

Response Rate. Questionnaires were mailed to 332 members of boards of directors who represented eight voluntary health agencies in Missouri. Of these, 254 or 76.5% responded to the questionnaire. The percentage of questionnaires returned by board members of the various agencies was A = 82.8%, B = 68.9%, C = 80.0%, D = 73.1%, E = 75.0%, F = 88.9%, G = 76.4% and H = 66.7%. The overall response rate of 76.5% indicates that the respondents are reasonably representative of board members of large voluntary health agencies in Missouri.

Age and Sex. Of 254 board members, only 19 (7.5%) were less than 40 years of age, 81 (31.9%) were 40-49 years old, 84 (33.0%) were 50-59, 52 (20.5%) were 60-69 and 18 (7.1%) were 70 or more years of age (Table 1). The youngest board member was a 28-year-old man. Obviously, a membership on the board of directors of a voluntary health agency is difficult to obtain for persons less than 40 years of age and for those 70 or more years of age. Most of the older members had been members of the board for ten or more years. Owing to the high percentage of professional men, managers and proprietors on the boards, it is not surprising that young men were not invited to become members. These young men simply had not become well established in business and in positions of community leadership.

TABLE 1
AGE AND SEX DISTRIBUTION OF BOARD MEMBERS OF SELECTED
VOLUNTARY HEALTH AGENCIES IN MISSOURI

Agency Code	Age in Years										Total	
	< 40		40-49		50-59		60-69		70+			
	M	F	M	F	M	F	M	F	M	F	M	F
A	0	0	9	9	10	11	8	16	4	5	31	41
B	2	0	12	0	10	2	3	1	1	0	28	3
C	2	0	2	1	1	0	1	0	1	0	7	1
D	7	1	13	2	8	2	2	2	1	0	31	7
E	1	0	1	0	9	2	3	0	2	0	16	2
F	2	0	4	3	3	2	0	2	0	0	9	7
G	2	1	19	4	12	4	5	4	1	3	39	16
H	1	0	1	1	7	1	2	3	0	0	11	5
Total	17	2	61	20	60	24	24	28	10	8	172	82

M = Male

F = Female

The overall composition of the boards of directors of these agencies is heavily dominated by men. The score—172 (67.7%) men versus 82 (32.3%) women. Male predominance is especially noticeable in the younger age groups. For example, for board members less than 40 years of age, there were 17 men versus 2 women; for those 40-49 years old, there were 61 men versus 20 women; and for those 50-59 years old, there were 60 men versus 24 women. After age 60 the number of men versus women board members was about equal. It seems likely that many voluntary health agencies utilize younger women as volunteers and for committee assignments, while reserving the bulk of board memberships for men. The pattern of utilizing middle aged or older men for decision making

functions on boards is similar to that of profit-making, big business in the United States. The front ranking agencies (G, H, and B) followed the general pattern of male predominance for board memberships.

Education. Board members of voluntary health agencies represent a very highly educated group of individuals. Table 2 reflects the highest level of education attained by board members of the various agencies. For only three (1.2%) of 254 board members, elementary school was the highest level of education. An additional 28 (11.0%) of the members had either attended high school or held a high school diploma. Fifty-three (20.9%) of the members attended one to three years of college and 60 (23.6%) hold a baccalaureate degree. A striking finding was that 94 (37.0%) of

TABLE 2
HIGHEST LEVEL OF EDUCATION OF BOARD MEMBERS OF SELECTED
VOLUNTARY HEALTH AGENCIES IN MISSOURI

Highest Level of Education	Health Agency Code								Total
	A	B	C	D	E	F	G	H	
Elementary School									
1-4 yrs.	—	—	—	—	—	—	—	—	—
5-7 yrs.	—	—	—	—	—	—	—	—	—
8 yrs.	3	—	—	—	—	—	—	—	3
High School									
1-3 yrs.	1	1	—	—	—	—	—	—	2
4 yrs.	8	—	3	3	1	1	9	1	26
College									
1-3 yrs.	24	2	3	5	3	4	7	5	53
4 yrs.	17	6	—	13	8	4	8	4	60
5 yrs. or more	15	22	1	15	2	6	30	3	94
Not Stated	4	—	1	2	4	1	1	3	16
Total	72	31	8	38	18	16	55	16	254

TABLE 3
OCCUPATIONS OF BOARD MEMBERS OF SELECTED
VOLUNTARY HEALTH AGENCIES IN MISSOURI

Occupation of Board Members	Health Agency Code								Total
	A	B	C	D	E	F	G	H	
Professional & technical	35	26	1	22	5	9	32	7	137
Farm & farm managers	2	—	—	1	—	—	—	—	3
Managers & proprietors, except farm	7	1	2	9	8	4	6	4	41
Clerical & kindred workers	5	—	—	—	—	—	1	—	6
Sales workers	3	1	2	—	1	—	3	2	12
Craftsmen & foremen	2	—	—	1	1	—	1	—	5
Operators & kindred workers	—	—	—	—	—	—	1	—	1
Private household workers	—	—	—	—	—	—	—	—	—
Service workers, excl. household	—	—	—	—	—	—	—	—	—
Farm laborers & foremen	—	—	—	—	—	—	—	—	—
Laborers, except farm & mine	—	—	—	—	—	—	—	—	—
Housewife	16	2	1	4	—	—	11	3	37
Retired or not stated	2	1	2	1	3	3	—	—	12
Total	72	31	8	38	18	16	55	16	254

the board members had attended five or more years of college. Of these, 72 hold doctors degrees (primarily in medicine, dentistry and education), 18 hold masters degrees (primarily in education, social work and nursing) and four had completed at least one year of graduate work but have not received a graduate degree. For 16 (6.3%), the educational level of the board member was not stated. In our experience, the formal educational level of board members of voluntary health agencies far exceeds that of board members of private industries and even that of most colleges and universities. For the most financially successful agencies, the following percentage of their board members had five years or more of college: G = 54.5%, H = 18.8% and B = 71%.

Occupation. Table 3 provides a list of the occupational categories of the board members of voluntary health agencies in Missouri. This table shows that people in three occupational categories make up the bulk of board members. First, there is the pronounced preponderance of professional and technical workers (137 board members or 53.9%). This is followed by managers and proprietors, except for farm, 41 (16.1%) and housewives, 37 (14.6%). Of the professional and technical workers, 61 hold M.D. or D.O. degrees; 28 were other health professionals such as nurses, dentists and pharmacists; 20 were attorneys; and 18 were teachers. Most of the managers were executives of industries and the proprietors of small businesses. Agencies G and H followed the average trend in terms of

the percentage of board members who represented professional workers, managers and housewives. However, agency B had 83.9% professional workers, only 3.2% managers and 6.5% housewives.

For organizations which seek contributions from the general public, there is poor representation on the board of directors from such major occupational categories as farmers and farm managers, clerical and kindred workers, sales workers, craftsmen and foremen, operators and kindred workers, etc. Apparently, many categories of white collar and blue collar workers have not been considered as potential board members by these organizations.

Place of Residence. Board members of voluntary health agencies in Missouri reside in cities and towns of all sizes. Table 4 shows that 17.7% of board members reside in towns of less than 2,500 population, 8.7% in towns of 2,500-4,999 population, 7.9% in towns of 5,000-9,999 population, 13.4% in towns of 10,000-19,999 population, 13.0% in those of 20,000-49,999 population, 6.7% in those of 50,000-99,999 population and 32.7% in cities of 100,000 or more population. In part, the distribution of places of residence of the board members is related to the number of local chapters or units the agency has organized. For example, most (36 out of 45) of the board members living in places of less than 2,500 population are associated with agency G which has 114 chapters and agency A which has 109 chapters. These agencies also have large boards of directors. On the other hand, most of the board members of agency E live in or near St. Louis.

TABLE 4

POPULATION OF PLACE OF RESIDENCE OF BOARD MEMBERS OF SELECTED VOLUNTARY HEALTH AGENCIES IN MISSOURI

Population of City or Town	Number of Board Members by Agency Code								Total
	A	B	C	D	E	F	G	H	
< 2,500	26	1	1	2	2	2	10	1	45
2,500- 4,999	13	—	—	1	1	—	4	3	22
5,000- 9,999	8	2	1	3	—	1	4	1	20
10,000-19,999	8	1	—	9	5	1	9	1	34
20,000-49,999	6	6	1	8	1	3	5	3	33
50,000-99,999	1	4	—	4	—	2	4	2	17
100,000 or more	10	17	5	11	9	7	19	5	83
Total	72	31	8	38	18	16	55	16	254

Agency E has only two chapters in Missouri. The cities having in excess of 100,000 population (Independence, Kansas City, St. Louis and Springfield) comprise approximately 28.7% of the population of Missouri and 32.7% of the board members of the voluntary health agencies studied.⁶ When one considers board members living in adjacent suburbs, the large cities are well represented on the boards of these agencies. A similar finding is true for cities of 50,000-99,999 population (Columbia, Florissant and St. Joseph) which comprise approximately 4.2% of Missouri's population and 6.7% of the board members.

Of the more financially successful agencies, G has a place of residence distribution of its board members very similar to the average distribution for all eight agencies. Agency H has board members living in all sizes of communities, but the distribution otherwise is not remarkable. On the other hand, board members of agency B are heavily weighted towards living in larger communities, i.e., those with 20,000 or more people. About 55% of its board members live in cities having in excess of 100,000 population.

Tenure on the Board. In each of the eight health agencies, board members are elected by the membership. On the average, the length of tenure for board members of these agencies was surprisingly long. Table 5 indicates that of 254 board members, 26 (10.2%) had served for one year, 25 (9.8%) for two years, 30 (11.8%) for three years, 31 (12.2%) for four to five years, 46 (18.1%) for six to nine years and 79 (31.1%) for ten or more years. In 17 (6.7%) instances, the years of tenure were not stated. The longest period of tenure was 39 years and about 25 individuals had served as board members for 20 years or more. While the letterhead stationery of several agencies indicates that board members serve for three year terms of office, it is apparent that members can be reelected to the board of directors for several successive terms. Agencies G, H and B were characterized by having a high percentage of board members with six or more years of tenure (G = 40.0%, H = 68.8% and B = 48.4%).

Of interest is the fact that an average of 66% of the board members had served in these agencies previously as volunteer workers. The per-

TABLE 5

YEARS OF TENURE OF BOARD MEMBERS OF SELECTED VOLUNTARY HEALTH AGENCIES IN MISSOURI

Years of Tenure	Agency Code								Total
	A	B	C	D	E	F	G	H	
1	6	1	—	6	3	1	8	1	26
2	6	2	—	7	1	2	5	2	25
3	3	5	3	9	4	3	3	—	30
4-5	8	8	1	5	1	1	6	1	31
6-9	9	9	1	9	2	4	9	3	46
10+	37	6	3	1	6	5	13	8	79
Not stated	3	—	—	1	1	—	11	1	17
Total	72	31	8	38	18	16	55	16	254

TABLE 6
NUMBER OF MEMBERSHIPS IN OTHER CIVIC AND FRATERNAL ORGANIZATIONS
REPORTED BY BOARD MEMBERS OF SELECTED VOLUNTARY HEALTH AGENCIES IN MISSOURI

No. Memberships in Organizations	Health Agency Code								Total
	A	B	C	D	E	F	G	H	
None	7	4	2	3	5	—	1	1	23
1-5	47	13	4	17	9	8	25	10	133
6-10	15	10	1	12	4	5	18	4	69
11 or more	3	4	1	6	—	3	11	1	29
Total	72	31	8	38	18	16	55	16	254

centage of board members who had served as volunteer workers ranged from 86% for agency G to 50% for agency D.

INTERESTS OF BOARD MEMBERS

General Community Interest. Board members of voluntary health agencies, for the most part, are "joiners" rather than "non-joiners" of community civic, social and fraternal organizations. Table 6 indicates the number of civic organizations, other than the health agency board, to which that member belongs. Of 254 board members, only 23 (9.0%) belonged to no other organizations, 133 (52.4%) belonged to one to five other organizations, 69 (27.2%) belonged to six to ten other organizations and 29 (11.4%) belonged to 11 or more other organizations. The term, "joiner," is not used in a derogatory sense. The term merely reflects that these individuals are "involved" in community problems and derive satisfaction from interacting and communicating with other human beings. For agency G, 52.7% of its members belonged to six or more or-

ganizations. The corresponding percentages for agencies H and B were 31.2% and 45.2%.

Reasons for Joining Board. Members of the boards of directors of the eight voluntary health agencies were asked, "What factor(s) interested you in becoming a board member?" This was an open-ended question. It is not surprising, therefore, that some members listed more than one factor or reason for becoming a board member.

Table 7 lists the reasons given by individuals for becoming board members of voluntary health agencies. These reasons were as follows: interest in the agency and its work, 66 members; professional interest in the disease, 58 members; previous experience as a volunteer or local board member of the agency, 42; providing a civic service, 38; individual, family member or friend had the disease, 37; invited to become a board member by a friend or another influential person, 37; helping individual patients, 18; improving general patient services by legislation or better management practices, 14; research to

TABLE 7
REASONS GIVEN FOR BECOMING A BOARD MEMBER OF A VOLUNTARY
HEALTH AGENCY IN MISSOURI

Reasons for Joining Board	Number of Board Members by Agency Code								Total
	A	B	C	D	E	F	G	H	
Interest in agency	29	4	2	6	1	3	18	3	66
Interest in disease	12	19	1	5	1	5	12	3	58
Local board member or volunteer	15	7	—	4	—	3	10	3	42
Civic service	14	4	—	6	3	3	4	4	38
Experience with disease	9	3	3	3	12	3	3	1	37
Invited to join	12	3	—	5	2	2	11	2	37
Helping individual patients	5	—	2	6	—	2	1	2	18
Improving patient services	2	—	—	10	—	1	1	—	14
Not stated	5	1	—	1	—	—	2	2	11
Research	—	4	2	—	3	—	2	—	11
Public education	5	—	—	—	—	1	3	—	9
Relative was member	2	—	—	—	—	—	1	2	5

find a cure for the disease, 11; education of the public about the disease, nine; and relative was a member of the agency, five. Eleven individuals did not state their reasons for becoming a board member.

Professional interest in the disease was not limited to physicians but also included dentists, public health nurses, social workers and those working in special education. Many individuals merited a seat on the state board of directors as a representative of a local chapter of the organization. Board members were not specifically asked a question if a member of their family or a close friend had the disease the agency fights against. However, 37 (14.6%) of 254 board members stated that this was the case. Perhaps this finding represents under-reporting, but if it is reasonably accurate, then personal or family experience with the disease was not a major motivating force in becoming a board member for many agencies. This finding, however, varies from agency to agency. It was an important motivating factor for agency E where 12 (66.7%) of 18 members listed it as a major reason for becoming involved. For agency C, three (37.5%) of eight members listed disease experience as an important factor in their commitment.

Agency directors should take note of the fact that 37 talented community leaders became board members simply because some friend or influential person asked for their assistance. Many people feel that "health" is a worthwhile community activity.

Interests in Agency Activities. Board members were queried about their relative interests in the major activities of voluntary health agencies.

A scale was constructed to measure a member's relative interests. A value of 1 indicated no interest, a value of 2 = slight interest, 3 = moderate interest and 4 = great interest. The highest possible score for an activity as rated by 254 board members is 254×4 or 1,016.

The major activities of voluntary health agencies include public education, professional education, patient services, fund raising, research and administration. The relative interest scores obtained from the 254 board members were public education = 868, patient services = 836, professional education = 824, research = 792, administration = 724 and fund raising = 716. Thus, board members as a group expressed more than moderate interest in public education, patient services, professional education and research. The

group expressed slightly less than moderate interest in administration and fund raising. It may surprise some people to learn that medical research did not receive a higher score. However, one should keep in mind that the interests these board members reflect are local and state goals and not necessarily the national goals of these health organizations. Our previous study of Missouri voluntary health agencies⁵ confirmed that agency directors felt that activities which provide more individual benefits were of major importance as local and state goals.

SUMMARY

This study of 254 board members who represent eight of the ten largest voluntary health agencies in Missouri provided the following findings. The average size of the board of directors of these agencies was 42 members. The board members were primarily 40 years of age or older. Of the board members, 67.7% were men and only 32.3% were women. The members represent an extremely well educated group of individuals: 60 hold a baccalaureate degree, 18 hold master degrees and 72 hold doctor degrees. The occupations of board members are made up of primarily three groups: professional and technical workers (53.9%), managers and proprietors (16.1%) and housewives (14.6%). The place of residence of board members is weighted towards communities with 20,000 population or greater. For the most part, board members are "joiners" rather than "nonjoiners" of community civic, social and fraternal organizations. The relative interests of board members in activities of voluntary health agencies were as follows: public education, patient services, professional education and research. There was less interest in administration and fund raising. The implications of these findings were discussed.

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President Nixon's sweeping economic proposals have pushed aside chances for Congressional hearings on national health insurance until after the first of the year. Four of the Nixon economic proposals require legislative action and this will keep the House Ways and Means Committee busy. Coupled with Congress' announced intention on adjourning in late October or early November, this could delay congressional action on national health insurance until late 1972 or possibly until the convening of a new Congress in 1973.

While the House Ways and Means Committee considers the Nixon economic proposals, the Senate Finance Committee will consider the Social Security Amendments (H.R. 1) already passed by the House. Chances are that the Senate will delete the Administration's welfare proposals (Family Assistance Plan) from H.R. 1 and add Sen. Wallace F. Bennett's (R.-Utah) Professional Standards Review Organization proposal of last year. Enactment of this legislation prior to adjournment is considered likely.

Also considered likely to be enacted prior to adjournment are the health manpower bills presently in conference. This legislation would authorize an estimated \$3.3 billion in aid to health profession students and their schools in the next three years and provide facilities and programs to close the manpower shortages in the health professions within seven years.

* * *

A Health, Education and Welfare Commission has been formed to study the entire range of medical malpractice problems. The Commission will conduct a series of public hearings on the fundamental causes behind the rising number of malpractice claims and their effects on the health care system, the legal system, the insurance industry and the general public.

In announcing the Commission's membership, HEW Secretary Elliot Richardson said, "I feel confident this outstanding group will make a major contribution towards solving one of the nation's most vexing health care problems."

Headed by Attorney Wendell Freeland of

Pittsburgh, Pa., the newly-created secretary's Commission on Medical Malpractice will represent health care providers and institutions, the legal profession, the insurance industry and the general public. Acting as additional consultants to the Commission will be advisory panels comprised of experts in the disciplines directly concerned.

The Commission will compile statistical data and other relevant information in a series of studies conducted by HEW primarily through contracts with nongovernment research organizations and universities.

Eli P. Bernzweig, HEW's specialist in the medical malpractice area, has been named executive director of the Commission staff. Loren F. Taylor, M.D., professor of anesthesiology at the University of Kansas Medical Center, has been named Deputy Executive Director.

The Commission will make a final report with recommendations to the HEW Secretary.

Charles Hoffman, M.D., President-Elect of the American Medical Association and member of the AMA Board of Trustees, is one of the Commission members. Others are Vincent H. Cohen, Hogan and Hartson, Washington, D. C.; Bernard J. Conway, Assistant Executive Director, American Dental Association; Mrs. Helen Creighton, R.N., LL.D., professor of nursing, University of Wisconsin-Milwaukee; William J. Curran, LL.D., S.M. Hygiene, professor of legal medicine, Harvard Medical School; Wendell Freeland, Pittsburgh; Howard Hassard, Hassard, Bonnington, Rogers & Huber, San Francisco; Paul B. Jarrett, M.D., Phoenix, Ariz.; Henry T. Kramer, President, North American Reinsurance Corp.; John E. Linster, senior vice-president, Employers Insurance of Wausau, Wausau, Wisc.; James E. Ludlam, Musick, Peeler & Garrett, Los Angeles; Richard M. Markus, Sindell, Sindell, Bourne, Markus, Stern and Spero, Cleveland; Edward H. Morgan, assistant secretary, Casualty Underwriting-Department C11, Aetna Casualty and Surety Company, Hartford, Conn.; George W. Northup, D.O., editor, American Osteopathic Association Journal, Livingston, N. J.; Miss Audra Marie Pambrun, R.N.,

director, Community Health Aides, Blackfee Community Action Program, Browning, Mont.; Mrs. Esther G. Schiff, Legal Counsel, Mt. Sinai Hospital of Greater Miami, Miami Beach, Fla.; Monroe E. Trout, M.D., J.D., New Canaan, Conn.; and Carl E. Wasmuth, M.D., J.D., Chairman, Board of Governors, The Cleveland Clinic Foundation, Cleveland, Ohio.

• • •

The President of the American Medical Association, Wesley W. Hall, M.D., recently praised the nation's press for a "growing sophistication" in dealing with health care issues.

Speaking before an audience of newsmen, federal officials and health organization representatives at the National Press Club in Washington, D. C., Doctor Hall said, "This is a most healthy development." Many news stories now analyze the issues raised and challenge and dispute assumptions rather than follow a "hackneyed theme," he said.

"If the people are fully informed, we doctors of America will put our trust in their ability to make the right decisions. . . . I find it encouraging that the press is approaching this subject with maturity, with skepticism and, most of all, with an open mind."

Noting that the AMA's Medigredit bill has attracted more than 150 sponsors, Doctor Hall said that this doesn't mean that Medigredit is going to be enacted but it does "mean that a substantial number of congressmen and senators agree with the principles that we used in drawing up a program and offering it to Congress."

Doctor Hall said that Medigredit makes available to everyone under 65 years of age a private program of complete medical and health care protection, covering both the ordinary and the catastrophic expenses of illness or accident.

"The protection can be a health insurance policy, membership in a prepaying plan or membership in a prepaid group practice. Each patient is left free to choose the kind of care he wants, and each physician is left free to practice as he wishes—alone or with other physicians."

The most important thing about Medigredit, said the AMA official, is that it maintains freedom for the patient as well as for the physicians.

"We believe that there is a lot of good in the present system. Two million Americans a day see their doctor, and although this probably is not all who should see a doctor, there is no reason

to throw out the system that has this capacity. Rather we should build on it."

• • •

A comprehensive actuarial study of all of the major proposals for national health insurance arrangements prepared by HEW has been released for the information of congressional committees studying the issue.

The actuarial report's prediction of gross underfinancing in the Kennedy proposal for federal assumption of the bulk of health care costs was the most noteworthy item in the 83-page report. The work was reviewed by outside experts to check on its fairness and soundness.

The major plans before Congress would compare in terms of additional costs to the government as follows:

Administration—\$2.6 billion

Kennedy—\$59.4 billion

Medigredit (backed by the AMA)—\$6.3 billion

Burleson (the health insurance industry plan)—\$7.3 billion

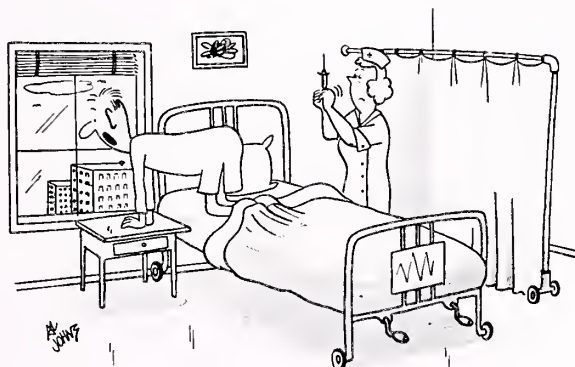
Javits (medicare for all)—\$41.6 billion

Hall-Long (catastrophic only)—\$3.2 billion, \$3.1 billion

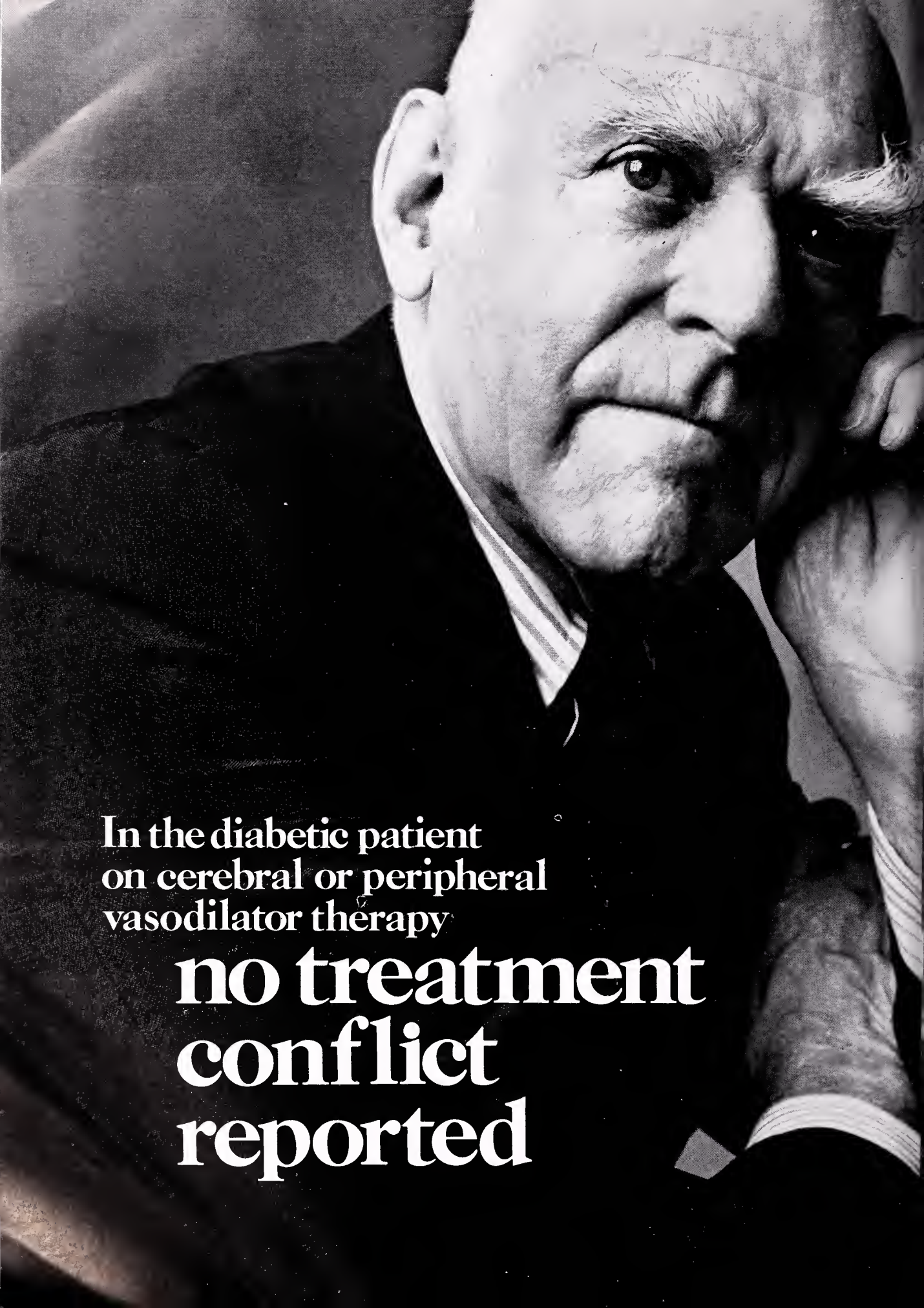
Pell-Mondale (mandated employer plans, health care corporations)—\$4.9 billion

For the most part, these costs represent "transferred" spending from the private sector to the federal sector. In the case of Medigredit, financed largely by tax credits for purchase of comprehensive private insurance, most of the "cost" represents a revenue loss rather than an additional expense.

The HEW report said overall federal spending under the Kennedy bill, including existing programs it would take over, would total \$81.6 billion in the fiscal year 1974, but that the proposed financing would raise only \$57 billion. Thus, it would be underfinanced by 43% or \$24.6 billion.



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Although not all clinicians agree on the value of vasodilators in vascular disease, several investigators²⁻⁵ have reported favorably on the effects of isoxsuprine. Effects have been demonstrated both by objective measurement^{1,5} and observation of clinical improvement.^{2,4}

Indications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). Composition: VASODILAN tablets, isoxsuprine HCl 10 mg, and 20 mg. Dosage: Oral—10 to 20 mg. t.i.d. or q.i.d. Contraindications and Cautions: There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. Side Effects: Occasional palpitation and dizziness can usually be controlled by dosage reduction. Complete details available in product brochure from Mead Johnson Laboratories. References: (1) Samuels, S. S., and Shaftel, H. E.: J. Indiana Med. Ass. 54:1021-1023 (July) 1961. (2) Clarkson, I. S., and LePere, D. M.: Angiology 11:190-192 (June) 1960. (3) Horton, G. E., and Johnson, P. C., Jr.: Angiology 15:70-74 (Feb.) 1964. (4) Dhrymiotis, A. D., and Whittier, J. R.: Curr. Ther. Res. 4:124-128 (April) 1962. (5) Whittier, J. R.: Angiology 15:82-87 (Feb.) 1964.

Mead Johnson
LABORATORIES

medical melange

Notes of interest from Here

. . . .

and There

"*The Genesis, Heritage and Progress of Medical Education at the University of Missouri, 1841-1970*," is the title of the book which has been written by **Dr. M. Pinson Neal** and which will be published this fall. Doctor Neal, the professor and former chairman of pathology, joined the faculty of the University of Missouri School of Medicine on Sept. 1, 1922 and has seen nearly 50 years of progress there. Funds provided by "unrestricted" gifts of alumni to the School of Medicine have made possible the printing of 500 paperbound books. After reserving many copies for Missouri libraries and medical groups, the medical alumni office is making the other copies available at no charge to interested alumni and friends of Doctor Neal.

"'Doc' Gives 69 Years of Service to Reeds Spring" is the headline for a feature story which appeared in the *Branson White River Leader* as a salute to **Dr. L. St. Clair Shumate** who began his practice in that community in 1902. Now 91 years of age, Doctor Shumate is still practicing medicine. He established his practice in Reeds Spring after graduation from Barnes Medical College in St. Louis.

Mr. Hollister S. Smith, executive secretary of the St. Louis Medical Society, was granted the Chartered Association Executive (CAE) designation by his professional society at a formal installation held recently during the annual convention and exposition of the American Society of Association Executives in Bal Harbour, Fla. The CAE designation is granted to recognize high standards of service and outstanding achievement in association management. ASAE represents 3,800 executives who manage leading trade, business, professional and technical associations in the United States and Canada. Their organizations, in turn, represent more than 21 million members. Mr. Smith also manages the Eastern Missouri Psychiatric Society and the St. Louis Academy of General Practice.

Dr. Howard J. McAlhany, Springfield, served as the Greater Ozarks Area Chairman of the Sixth Annual Labor Day Telethon to benefit the Muscular Dystrophy Associations of America, Inc. Jerry Lewis, national chairman of MDAA, hosted the 20-hour program which originated "live" from New York City and was carried over a special national network. This is the second year that Doctor McAlhany has served in this capacity.

Dr. William L. Macon, Jr., Ladue, has been named Councilor from the state of Missouri to the Southern Medical Association. Associate Councilors from this state are **Drs. Hjalmar E. Carlson**, Kansas City; **Robert K. Dorton**, St. Louis; **Albert M. Estes**, Cape Girardeau; **George J. Fuchs, Jr.**, Columbia and **James Y. Griggs**, St. Louis.

Dr. Thomas L. Dwyer, Mexico, has received "The Physicians Recognition Award" for 1970 in continuing education from the American Medical Association. The award is made in recognition of the completion of at least 150 hours of advanced medical training in each of three years.

Dr. William A Knight, Jr., Ladue, has been reappointed as a member of the State Board of Health by Gov. Warren E. Hearnes.—**Dr. William J. Smith** has been nominated to serve as president of the Windsor Chamber of Commerce. Doctor Smith has served as vice-president for the past two years.

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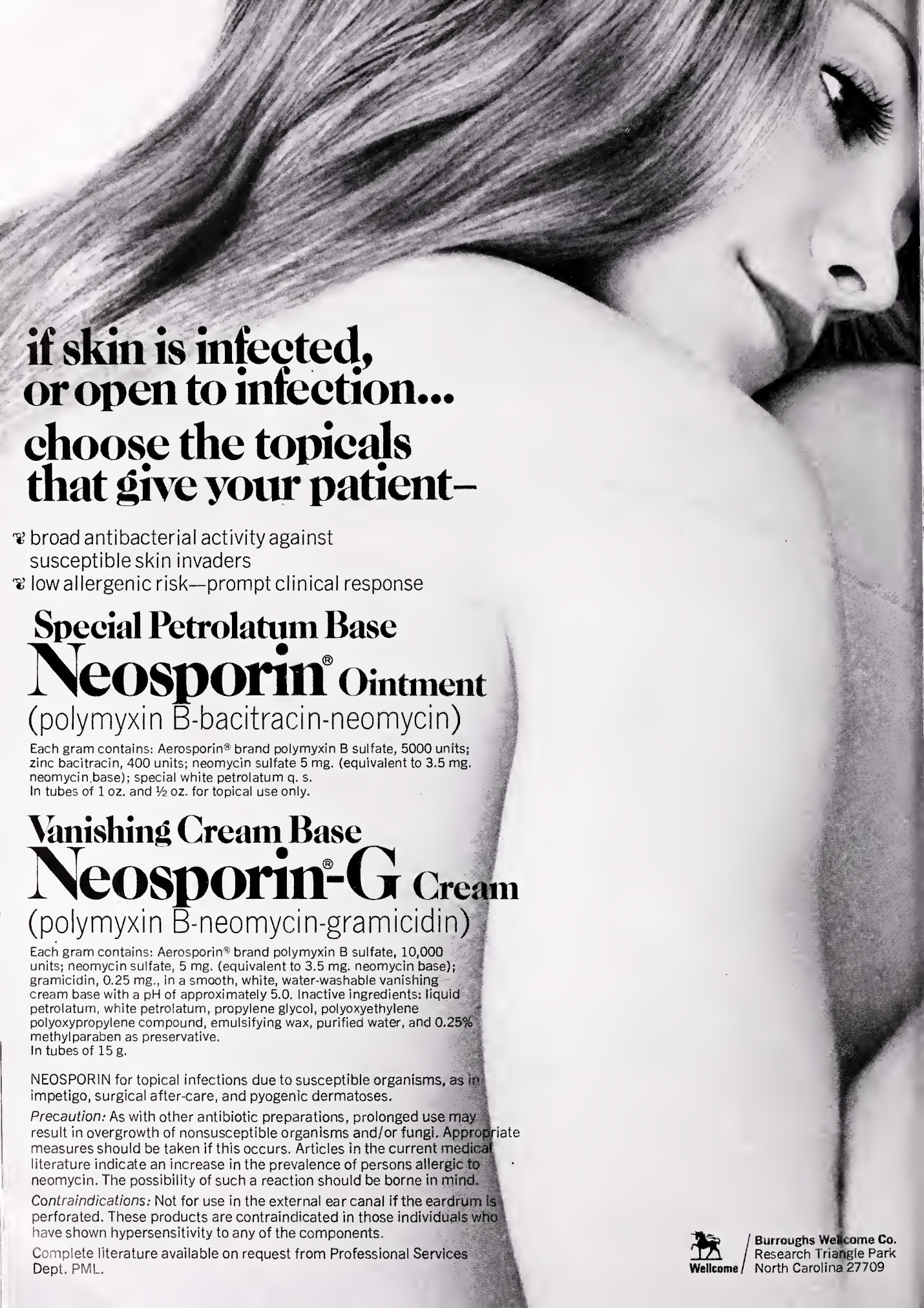
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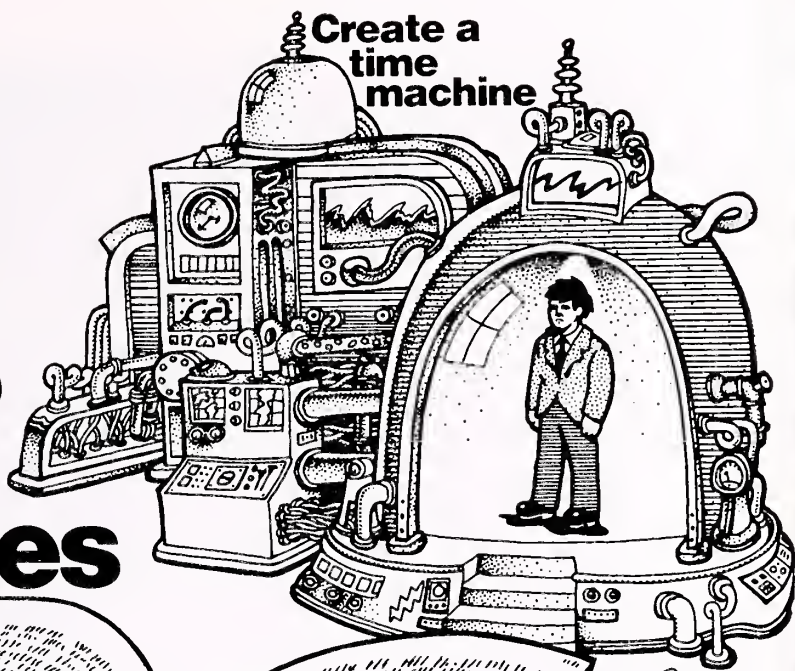
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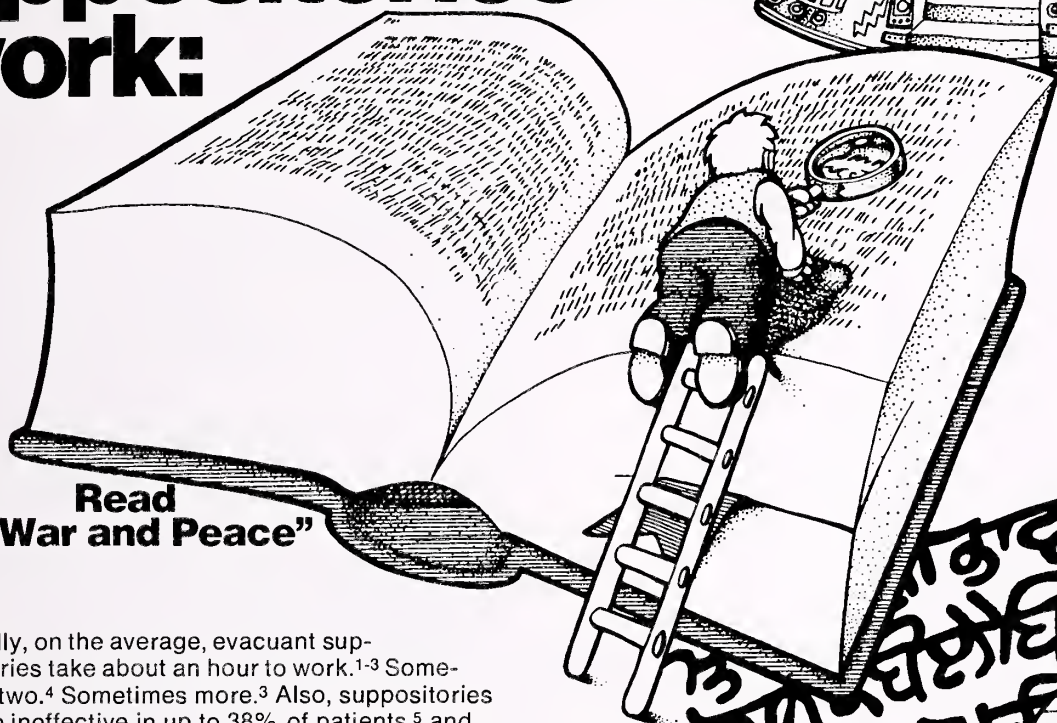


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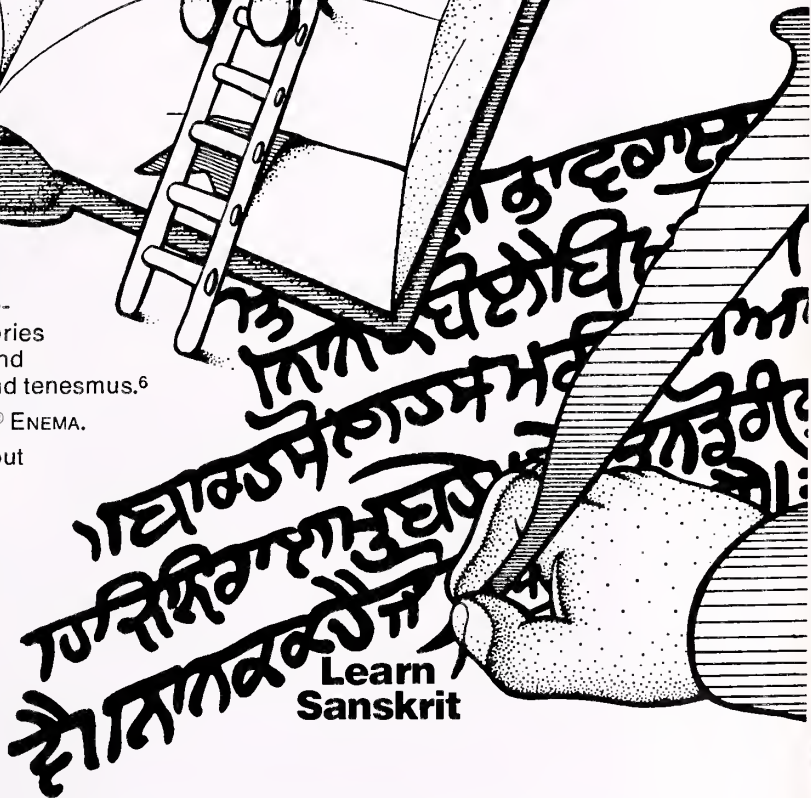
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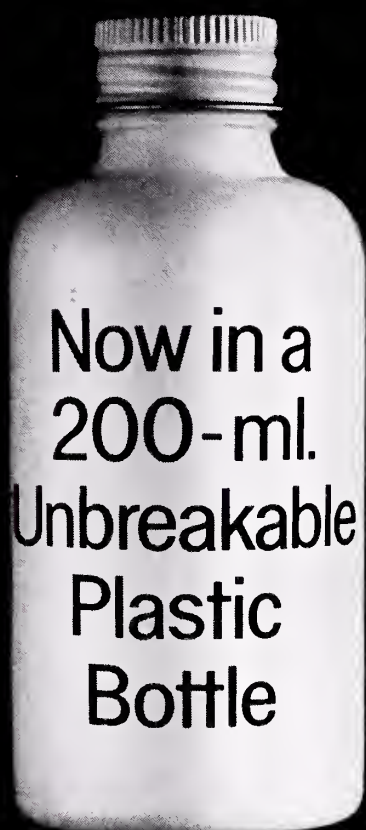


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References: 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriatr Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964.





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FRED L. REMARK, M.D. and PAUL M. WEEKS, St. Louis

Management of the Acutely Injured Hand

DEVELOPMENT OF A SYSTEMATIC APPROACH for management of upper extremity injuries provides not only for accurate assessment but for a framework for surgical planning, as well. Initial treatment of the injury is directed at restoring functional units, obtaining primary healing with minimal scar tissue formation and providing an optimum environment for subsequent surgery as indicated. Viability of the injured part is the *sine qua non* of repair. Reimplantation will not be discussed since collective review of the philosophical and practical aspects of limb reimplantation techniques and results are detailed elsewhere.^{1, 2}

The method of evaluation to be discussed is tissue oriented, i.e., skin, bone, joint, nerve and tendon. Surgical reconstruction is similarly oriented, systematically progressing through each tissue complex until restoration of motor unit function can be established. When there is no loss of substance or integrity of a system, one immediately proceeds to evaluate the succeeding system. Each subject area will be developed through illustrated discussion.

SKIN LOSS

When skin loss precludes wound closure, adequate coverage must be accomplished using either free grafts or pedicle grafts. Free grafts include those which are split thickness, full thickness or composite (composite grafts will not be discussed as they are not used in extremity surgery). Healing of split- and full-thickness grafts

necessitates adherence of the graft's dense, non-yielding dermis to the recipient site. Thus, they are not utilized when the restoration of a gliding surface immediately beneath the graft is paramount.

Since the pedicle graft has its own blood supply, any combination of subcutaneous, neural and bony tissue may be transferred with the flap. In fact, a spectrum of pedicle flaps is possible extending from a simple broad flap of skin containing numerous fine capillaries to a pedicle flap containing all the digital components based on a single artery and vein.

Split grafts are utilized when subcutaneous tissue or muscle is exposed in the depths of the wound and direct closure is not feasible (Fig. 1). Increasing the thickness of the split grafts increases the amount of dermis transferred,

The primary goals in the initial treatment of the acutely injured hand are restoring functional units, acquiring primary healing with minimal scar tissue formation and providing an optimum tissue environment for subsequent procedures, as indicated. The authors outline and illustrate a systematic approach to management, stressing the need to maintain supple joints. Drs. Remark and Weeks are from the Hand Rehabilitation Center, Division of Plastic Surgery, Washington University School of Medicine.



Fig. 1 Primary excision of a burn eschar exposes loose areolar tissue overlying the extensor tendons.



Fig. 2 Avulsion of the dorsum exposes the metacarpals, carpals and intervening joint spaces. Coverage with a pedicle graft is indicated as discussed in text.

thereby providing more functional padding. The free full-thickness graft can be used in clean acute wounds in which function demands extra "padding," i.e., digital pulp and palmar areas.

Pedicle flaps are utilized when local tissue loss precludes adequate coverage of tendons, bone, joints and neurovascular elements (Fig. 2). The premise for motor function is gliding of tendons free of restrictive adhesions. Tendons are encircled by a specialized structure, paratenon, which aids gliding. Free skin grafts applied to paratenon do not interfere with tendon gliding, but when paratenon has been lost, pedicle flap coverage becomes necessary. Exposed tendon covered with a pedicle flap develops minimal scar tissue formation and adhesion between the tendon and underlying fat of the flap.

Exposed bone, which is or has been traversed by functional motor units, requires pedicle flap coverage in anticipation of the restoration of motor units across the area. Periosteum readily accepts a split graft. However, if tendon grafting, repair or transfer is anticipated, free split or full-thickness grafts provide inadequate gliding surfaces.

An exposed joint in the hand, wrist or elbow must be closed with a pedicle flap if joint mobility is to be preserved. When tissue is replaced over the dorsum of a joint, the joint is moderately flexed to insure transfer of adequate pedicle tissue. Conversely, if the volar surface is covered, the pedicle graft is inserted with the wrist in moderate extension.

BONE

When treating hand injuries, particularly fractures, one must be most cognizant of edema for-

mation. The protein rich edema fluid fills the interstices of the collateral ligaments and soft tissues surrounding joints and tendons. As collagen is deposited, the collateral ligaments shorten and the flexor and extensor tendons become bound to surrounding immobile structures. Consequently, optimum fracture treatment includes (1) reduction and immobilization of the fracture, (2) maintenance of digital length and proper rotation, (3) preservation of joint motion and (4) minimizing edema formation.

Immobilization can be accomplished with either external or internal splinting. External splinting, i.e., plaster cast, usually requires immobilizing more than just the two joints in juxtaposition to the fracture. If external splinting is prolonged, stiff joints and tendons adhesions may develop. Dissatisfaction with external splinting has led to a greater interest in internal fixation with various screws, plates, wires, etc. The advantages of internal fixation include (1) firm approximation and immobilization of the fracture, (2) prevention of rotatory movement, (3) maintenance of digital length and (4) minimum immobilization of juxtaposition joints. The disadvantages include infection, impingement of wires on tendinous structures and edema formation secondary to surgery.

Simple fractures are readily managed with pin fixation (Fig. 3). The transverse fracture of the long finger middle phalanx has been reduced and immobilized in proper alignment without immobilizing any digital joints. Exercises are begun within five days after fixation to discourage the development of stiff joints (Fig. 4).

The criterion of success is ultimate function in the part, and the means by which this can



Fig. 3 Compound transverse fractures of the middle phalanges of the long and ring fingers are evident.

best be accomplished is determined by the operator's experience and expertise.

NERVE INJURY

The disagreement concerning primary versus secondary nerve repair has been resolved into the concept of delayed primary repair. The factors championed by each group will be presented to understand the rationale of the delayed primary repair concept.

The factors favoring nerve repair at the time of acute injury include (1) absence of scar tissue necessitating extensive dissection, (2) nerve mobilization is minimized as cut ends have not retracted and contracted, (3) time and number of operative procedures are saved if anastomosis is successful, (4) the early nerve repair yields better motor function recovery, (5) particularly good results are obtained in children with primary repairs and (6) digital nerve lacerations almost necessitate primary repair.

If one elects to do a primary repair, an advancing Tinel's sign must be elicited after adequate time has elapsed for the latent period. The length of the latent period is determined by the time required for the regenerative process to become organized and for the regenerating fibers to traverse the anastomosis. If the anas-



Fig. 4 Cross pinning with smooth Kirschner wires permits early mobilization of digital joints.

tomosis has been perfect, the latent period will be limited to the time required for the regenerative process to become organized, i.e. 40 to 50 days. Since regenerating nerve advances at approximately 1.5 mm per day, any delay beyond the latent period is due to scar about the anastomosis. If one does primary repairs, he must carefully and frequently record the position of an advancing Tinel's sign. When advancement does not occur, the surgeon must recognize and admit the need for secondary repair. If this decision is delayed, fibrosis and shrinkage of the distal nerve segment becomes extensive enough within a few months to interfere with regeneration.

The factors favoring *early* repair after obtaining healing of injured tissues include (1) division of nerve by blunt instrument which inflicts much concomitant tissue damage, (2) avulsion injury requiring primary attention to pedicle flap coverage, (3) grossly contaminated injury, (4) if the damaged tissues are allowed to demarcate (scar) over a period of two to four weeks, the level of viable nerve becomes strikingly obvious; and (5) fibrosis about the perineurium facilitates nerve suture.

It is most helpful at the time of acute injury to overlap the nerve ends by 1 cm to 2 cm with a single suture. This minimizes the need for mobilization of the nerve ends at a second procedure and reduces the need for severe flexing of a joint to gain length.

TENDON DISRUPTION

Restoration of tendon function implies restoration of tendon gliding. Surgical efforts are directed to obtaining healing in a milieu which



Fig. 5 A transverse section of the middle phalanx reveals the fibro-osseous tunnel closely encircling the profundus and sublimis tendons.

will produce favorable adhesions, i.e., adhesions that can be favorably modified by stress to permit gliding. Ideally, tendon anastomoses are accomplished in a bed of loose areolar tissue or fat. Fixed nonyielding structures, such as palmar fascia, digital sheath and fracture callous, are to be avoided to prevent nonyielding adherence of the healing tendon anastomosis. Consequently, the concept of primary versus secondary tendon repair has developed.

The flexor tendons are encircled by loose areolar tissue from the tendon origin to the distal palmar crease. From the distal palmar crease to the distal phalanx the tendons are enclosed in fibro-osseous tunnels (Fig. 5). Primary repair of flexor tendons divided at the level of the forearm, wrist, palm or over the distal phalanx is indicated in clean wounds. Clean lacerations of tendons within the fibro-osseous tunnels (from the distal palmar crease to the midportion of the middle phalanx) have divided support for primary versus secondary repair. If the nonyielding fibro-osseous tunnels were completely excised, the tendons would bowstring from the palm to the distal phalanx. Thus, portions of the sheath must be retained to act as pulleys. The main drawback to primary tendon repair is adherence of the tendon to the nonyielding fibro-osseous tunnel. As a basic principle, skin closure anticipating a secondary flexor tendon graft or tenorrhaphy several weeks later is without reproach.

The fibro-osseous sheaths encircle the extensor tendons only over the wrist area. Since the amplitude of motion of the extensor tendons for complete digital flexion and extension is small—

1.6 cm—primary repair is the general rule. The fibro-osseous tunnels may be excised when the extensor tendons are divided within the tunnels.

JOINTS

Restoring function in the injured hand demands preservation of supple joints. Stiff joints may develop from direct injury or in response to distant injury. The structural factors responsible for normal joint stability must be understood to permit more knowledgeable care of the injured hand. Anatomically, these factors are either intracapsular or extracapsular.

The intracapsular structures include the collateral ligaments, the volar plate and the joint capsule. Injury of the ulnar collateral ligament at the thumb metacarpophalangeal joint has received particular attention.³ Acute injuries usually are treated by immobilization whereas longstanding injuries require operative intervention. Rupture of the collateral ligaments of the proximal interphalangeal joints has been reviewed by McCue *et al.*⁴ They recommend operative repair of ligaments which are completely ruptured and conservative management of the incomplete ruptures. Volar plate tears usually occur at the distal attachment of the volar plate to the base of the phalanx. The resulting hyperextension deformity is corrected by surgical repair of the tear.

The extracapsular structures contributing to joint stability include the intrinsic and extrinsic muscles which traverse the joint. Repair of these structures is accomplished according to the standard methods for tendon anastomosis.

Most frequently, joints become stiffened in response to distant injury. The anatomical factors listed above contribute to joint stiffness when coupled with edema formation. Edema formation must be minimized by pressure dressings and constant elevation of the extremity. Elevation is not simply raising the forearm for brief periods or carrying it in a sling. The hand is elevated as high as possible with the elbow extended. This position is maintained until edema has completely subsided and is immediately reinstituted if edema recurs.

Constant awareness of maintaining supple joints is paramount in rehabilitating the injured hand.

SUMMARY

Evaluation of the acutely injured upper extremity is assisted by a systematic approach

(Continued on page 784)

Urological Care for the Child With Myelodysplasia

UNDERSTANDING the nature of urological disease in an infant or young child with myelodysplasia presents a challenge to any physician, be he urologist, pediatrician or general practitioner. This problem exists primarily because our knowledge of the disease course and its manifestations is inexact and incomplete. A more logical approach to the urological care for these children can be formulated if one considers the disease to represent a spectrum of varying clinical pictures. It is for this reason that this discussion will present in detail various manifestations of the urological disease state while offering a rationale for treatment of the varieties considered.

Quite obviously, in not all instances is the urological treatment necessarily the same. The range of required treatment may be from that necessitating only careful observation to a situation which calls for immediate and total urinary diversion. This discussion attempts to place the various treatments in their proper perspective when considering the disease as a dynamic and frequently changing process.

THE BASIC DISEASE PICTURE

Myelodysplasia, while oftentimes presenting with considerable anatomical variation, is physiologically represented by essentially one type of neurogenic bladder;¹ the embryologic fault consistently occurs in all instances at the origin of the nerve roots. The resulting neurophysiologic deficit is, therefore, by definition the lower motor neuron type. If complete disruption occurs, an entirely autonomous state results; otherwise, an areflexic bladder usually is the permanent result. The various clinical manifestations occurring with myelodysplasia, therefore, exist primarily not because of variations in the physiologic behavior of the bladder, but are present because of other conditions which alter the course of the disease process. For example, the age of the child, the presence or absence of infection, the severity of the involvement of the nerve roots and, not unimportantly, the ability for the child and parent to cooperate intelligently with the pediatrician or urologist may

If the physician considers the urological disease in children with myelodysplasia to represent a spectrum of varying clinical pictures, he can formulate a more logical approach to the care for these children. This is the suggestion of the author who discusses three distinct clinical groups of patients and the philosophy of management for each individual group. Doctor Bucy is Assistant Professor, Division of Genitourinary Surgery, Washington University School of Medicine.

all affect the eventual outcome of the disease.

By definition, spina bifida with myelomeningocele or myelodysplasia represents not only an incomplete fusion of the dorsal vertebral arches, but also involves the meninges, spinal cord and proximal nerve roots themselves. For the purpose of this discussion, we will not consider spina bifida occulta occurring without myelodysplasia or the meningocele alone, which does not involve the spinal cord or nerve roots. Myelodysplasia or myelomeningocele consists primarily of an unclosed neural plate which is spread out on the epidermal surface of the patient and is incorporated in a fluid-filled meningeal sac. Patten² refers to this condition as spina bifida with myeloschisis. If the abnormal spinal cord itself forms a portion of this cystic mass, as is customarily the case, one can then consider the term myelomeningocele to be appropriate. It should be stated for the case of completeness that occasionally one will encounter spinal cord and nerve root involvement involved in a cystic mass which is anterior to the vertebral bony mass or is "hidden" within an apparent spina bifida occulta. These anatomical varieties are extremely rare and present essentially no different physiological picture. One should be aware of their existence, however, for on occasion the patient with faint neurological deficits will be encountered with or without a neurogenic bowel or bladder and may be explained only after

x-rays reveal a cystic mass anterior to or within the vertebral bodies.³

A recent study of patients in all age groups with myelomeningocele found approximately 94% of the abnormalities to occur in the upper lumbar, lumbosacral or sacral areas of the vertebral column.⁴ Cervical and upper thoracic involvement represented only slightly more than 6% of all patients with myelomeningocele alone.

Woltman⁵ reported the incidence of cervical lesions at 8%. In all instances, it was found that the high lesions were almost never associated with urinary tract abnormalities. Also, uropathy found in individuals with the pure low sacral variant of the myelomeningocele was often of a lesser magnitude than that associated with the lumbar or lumbosacral variant.

As will be subsequently shown, urological disorders become considerably more prominent and threatening after infancy; during the newborn period and up to approximately 24 months of age, the morbidity and mortality associated with this congenital anomaly is almost exclusively and directly related to central nervous system or infectious processes involving the central nervous system. After the age of two years, the urinary tract and its resultant disorders usually provide the major source of concern for the attending physician.

THE INFANTILE VARIETY

Prior to the age of 24 months, it is uncommon to see urological abnormalities as a direct result of congenital myelodysplasia. In spite of the fact that the neurologic deficit is just as severe and permanent as it appears later on in life, nevertheless, for reasons which we will attempt to explain, urological manifestations are considerably less significant in this age group.⁶ Let us proceed, however, with the understanding that even in the newborn period, a small number of children might have massive urinary tract disease which is life-threatening from the first day of life. Rose⁷ indicates that approximately 10% of newborn children with myelodysplasia may have hydronephrosis and that this can increase to 25% to the age of three years. Urological investigation of all newborns with myelomeningocele, therefore, should be performed before the child leaves the hospital for the first time. The resultant studies should include at least a urine culture and intravenous pyelogram.⁸ If negative or normal, further investigation at this time need not be undertaken.

On the other hand, if a significant infection

is found in a clean voided specimen of the newborn, a retrograde cystourethrogram should be performed at that time because reflux can be contributing significantly to massive upper urinary tract dilation, even in the newborn. Urinalyses, estimates of renal function and intravenous pyelography should be performed on an annual or semiannual basis. If urinary tract infection does not exist or becomes a significant problem as determined by culture on a clean voided specimen, it is undoubtedly best that instrumentation such as cystoscopy or catheterization for culture or x-ray should not be undertaken. All too frequently, an infant with a sterile urinary tract can be converted into one with a significant urinary tract infection by the injudicious use of catheters solely for the purpose of investigation which probably was not indicated in the first place.

Should infection be a finding initially, then after thorough investigation had been completed, a course of maintenance anti-bacterials should be employed for an indefinite period of time. In some rare instances, success will be obtained in clearing the urinary tract infection. Even if this is so, very likely the individual will need long term prophylaxis because the child had demonstrated the ability to become infected. If one has evidence that upper urinary tract damage is occurring as manifested by dilation of the urinary tracts, including minor blunting of the calyces or minor broadening of the ureters with decreased ureteral spindle formations (Fig. 1), urinary tract infections or changes in the parameters being used for a measurement of renal function, surgical intervention probably is necessary. The age of the individual should not be a deterrent to surgery in order to preserve renal function. Temporizing with suprapubic or urethral catheter drainage in the face of renal deterioration or other evidence of progressive disease is unwise. Surgery, however, should not be contemplated solely for the purpose of correcting urinary incontinence in the young individual, because quite obviously in this age group, control is at a minimum anyway.

There appears to be some confusion over the employment of the Credé technique as an adjunct to therapy. Credé maneuvers may provide for longer periods of dryness during which the patient is not incontinent. Secondly and more importantly, it may assist in minimizing systemic urinary tract infections or progression of upper urinary tract damage. For these reasons specifically, the Credé maneuver is not



Fig. 1 IVP demonstrates early changes of upper urinary tract damage. The right collecting system shows early widening of the renal pelvis and upper ureter. There is decreased ureteral spindle formation.

customarily employed with great frequency during the newborn period if the child demonstrated no problem of management. Thus, if the upper urinary tracts show no evidence of damage and the child is uninfected, manual assistance for emptying the bladder need not be carried out more than two or three times each day. This will help minimize residual urine and the potential for infection. Performing the Credé's technique more frequently in order to achieve a state of longer continence is certainly not necessary in the newborn or infant child.

THE OLDER CHILD

As the child matures and develops physically and emotionally, the clinical aspects of the myelomeningocele take on a new perspective. Most importantly, the child develops increasing resistance to urinary tract outflow and, hence, a larger residual urine may accumulate. Whether or not this relates to anatomical changes in the older child's bladder neck and proximal urethra perineum is difficult to say. There are certainly increasing amounts of fibroelastic tissue in the periurethral areas, an increase in the muscular resistance of the urogenital diaphragm and peri-

neum. There also is elongation of the urethra as the child grows. Lapidès⁹ has suggested that resistance to urinary outflow is proportional to the urethral length and its inherent muscular tone. If the analogy is appropriate, the older individual will have more resistance on this basis while, at the same time, the bladder detrusor muscle maintains the same degree of weakness due to the lack of parasympathetic innervation. The imbalance results in an increase in resistance without change and intravesical propulsive forces. The sum, therefore, is in an increase in residual urine, an increase in tendency for infection and more opportunity for sepsis and morbidity. Indeed, this is the case and has been borne out clinically by numerous authors.¹⁰ It is for this reason that closer observation can be maintained, and, at this point, the Credé technique becomes considerably more significant in the overall well-being of these patients and in their management. Credé maneuvers (Fig. 2) should be employed by the parent approximately every two hours. If this is successful, one can limit the bladder residual urine in these children and, even if infection is present, minimize the systemic manifestations of it. Certainly, concomitant antibacterial therapy is indicated. Proper abdominal straining and, if possible, the use of a commode for voiding in the sitting position will frequently assist the individuals to empty their own bladders. Occasionally, children with incomplete lesions will have some degree of perineal sensation and even mild sensation of fullness or urgency and can indicate appropriately the need for voiding.

Inasmuch as the control via the somatic in-



Fig. 2 Credé maneuver of the older child's bladder. Adequate intravesical pressure is produced allowing for good voiding stream.

nervation of the external urinary sphincter is practically absent, the parent must be extremely observant of the child and cooperate by providing a means of conveniently emptying the bladder at a moment's notice. If this is not the case, the child will be consistently wet, and this is a discouraging factor for the young individual.

If one elects to maintain this "conservative" approach in the older child, it is extremely important to obtain a good estimate of the duration of continence which these children may maintain. It is not uncommon to see an increasing duration of continence when the proper control and training of both child and parent are emphasized.^{11, 12} While this is far from perfect or ideal, it may be enough to give the child encouragement and a desire for improvement. Though the use of diapers or napkins is still necessary, with frequent changes a relative state of dryness may be achieved.

If this becomes the case, then it is difficult to believe that employment of urinary diversion in this particular instance would add anything to the child's well-being. This judgment must be made after a considerable watching and waiting period and should reflect the physician's, the parents' and the child's own attitudes. Certainly, it is inappropriate for a physician to suggest to an individual that diversion be performed for the sake of social convenience. If both the child and parent are well satisfied or have otherwise some hope of achieving satisfactory results, this opportunity should not be denied them. If urinary infections exist concurrently, then appropriate medications should be employed to minimize the morbidity. Even though the possibility of complete eradication of the infection is extremely slight, the physician's primary duty in this respect is to make sure that the child does not develop extensive upper urinary tract damage and associated renal deterioration while this "training period" is going on.

It is for this reason that frequent investigations radiographically and bacteriologically should be carried out routinely. If it is discovered that deterioration occurs in spite of any other sign of favorable progress, then surgical diversion of the urinary tract should be strongly advised.¹³ If it has been determined by the physician and agreed to by the parents that surgery will be undertaken, then the best method of diversion should be offered to the patient on the first occasion. The use of indwelling catheters, suprapubic tubes or cutaneous vesicostomies have no place in the customary long term management of the handicapped child. The ileal conduit diversion, as it is well known to urolog-

ical surgeons and pediatricians, should be performed. This offers the best opportunity for providing a sterile urinary tract with or without the use of antibacterials, even though a totally infection-free urine is unlikely if significant renal dilation and damage of the urinary tract has already occurred.¹⁴

Nevertheless, diversionary surgery does offer the best opportunity for arresting the progression of the renal deterioration. If the surgeon elects to perform an ileal conduit diversion, he should be cognizant of the technical pitfalls that he is about to face. Perhaps one of the most tragic and, at the same time, avoidable errors made is that of improper placement of the ileal stoma. An individual who has an ileal stoma which is positioned so that no appliance will properly fit over it in a water-tight way is just as unhappy as the person who is wet from below. It is our practice to fit the individual with the selected permanent type of appliance several days prior to surgery and allow the child to wear the bag containing water in the selected site, both day and night to make sure that a water-tight seal will not be broken by skin folds or bony prominences. The various surgical aspects of performing the ileal conduit diversion are available to any surgeon and are discussed more eloquently in the appropriate texts.

THE LOCALIZED MYELOMENINGOCELE

In some instances, somewhat more rarely we see the myelodysplasia confined only to the lowermost aspect of the sacral segments (Fig. 3). In these instances, the disease process runs a more variable course.¹¹ Indeed, ambulation for these people may be performed without any difficulty whatsoever and the affliction would go entirely unnoticed were it not for hypesthesia on the lateral aspects of the feet or heels suggesting sacral involvement. In the vast majority of these cases with involvement of the sacral cord, some degree of neurogenic bladder will exist. Not uncommonly, however, individuals present somewhat older, in their late teens or early 20's, having been otherwise completely well. They will present, perhaps, for the first time with an overt urinary tract infection.

The fact is that, very often, individuals with low sacral lesions will go through their early and postpubertal years completely unaware of a urinary problem which may exist. This is so because the nerve damage may involve only one or perhaps two spinal nerve roots to the bladder, thus providing a satisfactory degree of urinary control. In some with repeated infection, there may be urgency which has been adequately



Fig. 3 A well localized sacral myelomeningocele in a 26-year-old woman. IVP is essentially normal. Urinary tract infections were frequent.

treated in the past simply by administering antibacterials. For others, there may be enuresis or there may be the weakness of the external sphincter providing some degree of stress incontinence.

Any one of these conditions, if not thoroughly investigated, might be interpreted as being relatively insignificant and unrelated to a neurological problem. If, indeed, a person demonstrates no significant uropathy of the upper urinary tract, the most important aspect of the individual's handicap is simply that the patient and the physician himself be aware of the problem so that the appropriate follow-up can be maintained. Antibacterial therapy may be indicated. While this condition may exist for the majority of persons with localized sacral myelomeningoceles, occasionally an individual will be encountered who is relatively asymptomatic while at the same time, has significant urinary tract destruction. Thorough investigation of the entire urinary system, including cystometric studies and urodynamic evaluation of both ureters and bladder, should be undertaken. If the damage has occurred because of urinary tract infection alone while there exists only a minimal amount of neuropathy, reconstructive surgery might be contemplated. With intelligent follow-

up care, further or repeated urinary tract disorders might not occur. It should be emphasized that this approach, which perhaps could be considered even "radical," would have to be undertaken after exhaustive evaluation of the lower urinary tract physiology had been completed. It would be a mistake to perform corrective surgery on the bladder neck or ureterovesical junction if one were dealing with a totally incapacitated bladder. Obviously, if massive and severe urinary tract damage has occurred so that both ureters are atonic and conduct urine poorly by cineradiographic studies, it would be foolhardy to expect corrective surgery to be beneficial. In this instance, an ileal conduit performed as high as possible would be the procedure of choice.

SUMMARY

In summation, three distinct clinical groups of patients with myelomeningocele have been presented: The infant variety, which is manifested only occasionally by significant urological disease; the older child, who is problematic because of increased risk of urinary tract infection, renal damage and the inconvenience of incontinence; and the third group, which is composed of those with the well-localized sacral myelomeningocele, who have urological disturbances less frequently. The philosophy of management of each of these three groups is discussed.

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Amphetamines: Addictive or Dependent Drugs?

IN THE PAST TEN YEARS, amphetamine-type drugs have become increasingly abused by the general public. Along with this increase in the misuse of these drugs has come confusion regarding what long-term effects these drugs have on the abusers. One of the biggest questions is, simply, does chronic use of amphetamines lead to addiction to or dependence upon these drugs? The question which then arises is what kind of "dependence" is meant in this case? The author felt that it would be worthwhile to investigate and, hopefully, to clarify the implications of chronic amphetamine abuse with regard to addiction versus dependence. In doing this, it also will be necessary to define "dependence" and how this term evolved during the last ten years.

In 1964, the World Health Organization decided to revise the terms used to describe the effects of chronic drug abuse. It changed the terms from addiction/habitation to simply drug dependence.¹ Utilizing the new term of drug dependence, each class of drugs would then have its dependence characteristics defined specifically for that class of drugs and their chronic effects. The WHO had first defined addiction and habituation in 1952. These definitions were revised in 1957. Because of the increasing number of drugs being abused and their variable long term effects, however, the terms "addictive" and "habituating" were felt to be too restrictive. Therefore, the term "drug dependence" was selected so that each class of drugs could be defined as to its specific dependence-producing effects.

In 1965, a further clarification of this term and specific drug class dependency characteristics was reported by N. B. Eddy.² In association with other WHO officials, drug dependence was defined, as follows:

"Drug dependence is a state of psychic or physical dependence, or *both*, on a drug, arising in a person following administration of that drug on a periodic or continuous basis."

Amphetamine dependence was then defined specifically, as follows:

"(1) A desire or need to continue taking the drug;

"(2) consumption of increasing amounts to obtain greater excitatory effects . . . accompanied in some measure by the development of tolerance;

"(3) a psychic dependence on the effects of the drug related to a subjective and individual appreciation of the drug's effects;

"(4) and general absence of physical dependence so that there is no characteristic abstinence syndrome when the drug is discontinued."

Eddy and others will admit, however, that withdrawal from chronic use of large doses of amphetamines is not symptomless. There is a period of fatigue and sleepiness which is explained as a loss of sleep that was masked by the chronic use of amphetamines. At the same time, there usually is a state of depression which can be both physical and psychological. Frequently, the threat of suicide is greatest when this post-drug withdrawal depression is present. These symptoms of fatigue, sleepiness, depression and potential suicide are not felt to be a consistent abstinence syndrome.

Freedman and Kaplan, in their *Comprehensive Textbook of Psychiatry*, state that "addiction is apparently not common" and that there is no real physiological withdrawal syndrome.³ Thus, they feel that the drug can be withdrawn immediately without untoward effects. However, they do make note of the fact that a psychosis can and does occur in some cases after the drug is withdrawn. This psychosis usually resembles that of a paranoid schizophrenia and can be mistaken for an actual case of paranoid schizophrenia if a drug history is not obtained. In addition, this psychosis can occur after a single dose (about 30 mg or more) as well as after chronic abuse of these drugs. Some of the psychotic characteristics are excitement, auditory and visual hallucinations, paranoid thinking and loose associations. Curiously enough, the patient always maintains a clear sensorium. This phenomenon is not felt to be part of an abstinence syndrome because its incidence varies from study to study and also because it is primarily psychologic in nature.

One individual who has studied amphetamine abuse for a number of years is P. H. Connell. In his monograph entitled *Amphetamine Psychosis*, written in 1958, he discusses 42 cases of amphetamine psychosis.⁴ In this discussion, he states that there are withdrawal symptoms such as depression, suicidal ideas and sleepiness. At the time that this monograph was written, he considered amphetamines to be addictive drugs. Furthermore, Connell felt there was a high rate of relapse because the addiction to these drugs was severe. In 1965, one year after the report by the WHO, Connell still felt that those persons who considered amphetamines not to be habituating were being too lenient in their view of amphetamine abuse.⁵ Even though amphetamines were not addictive in the strict definition of the term, he felt that they were certainly more harmful in terms of chronic abuse than another simple habituating class of drugs might be. By 1966, Connell published an article in the *Journal of the American Medical Association* in which he again reviewed his ideas about amphetamine addiction.⁶ He had decided that the best term to describe the effects of chronic amphetamine abuse on the individual would be "dependence" as defined by the WHO. Those symptoms, such as sleepiness, fatigue and depression, were now considered to be symptoms of this dependence.

Again in 1968, Connell equated amphetamine abuse with dependence.⁷ He referred to the sleepiness, fatigue, depression and suicidal ideations as "side effects of withdrawal." He also reviewed the Japanese experience with amphetamine abuse after World War II. Previously, this problem had been described as amphetamine addiction and there were thought to be about 200,000 amphetamine addicts in Japan in the late 1940's. Connell, however, now calls this a problem of amphetamine dependence. Therefore, it is apparent that one of the authorities in the study of amphetamine abuse formerly referred to amphetamines as addicting. Currently, he describes them as producing a phenomenon of drug dependence in those individuals who abuse them.

The American Medical Association published a book on the subject of drug dependence⁸ in 1969 for physicians. In this book, it is stated that "there is no evidence that persons develop physical dependence on stimulant drugs." It also is noted that abrupt withdrawal of amphetamines is not life-threatening. However, withdrawal of the drug apparently can do several

things: (1) it may uncover an underlying depression; (2) it may precipitate a depressive reaction with suicidal ideations; (3) it may precipitate an acute schizophrenic episode; and (4) usually it causes symptoms of intense tiredness and sleepiness to occur for two to four days. Thus, the AMA feels that stimulant drugs do not produce a physical dependence. In addition, withdrawal of the drug may precipitate a set of symptoms, but these symptoms do not constitute an abstinence syndrome of a physical nature. These data constitute some of the current evidence for defining amphetamines as dependent drugs.

Let us now consider other scientists who have studied amphetamine abuse and who consider it to be an addictive drug when abused chronically. Before going further, however, it would be helpful to review the 1957 WHO definition of addiction which is as follows:

Addiction means that there is:

- (1) A compulsion to continue taking a drug and to obtain it by any means;
- (2) A tendency to increase the dose-tolerance;
- (3) Psychological and physical dependence on the drug;
- (4) A detrimental effect on the individual and society.

Although the views of P. H. Connell have been discussed and he now defines amphetamines as drugs producing dependence, it is interesting to note that at one time he did consider amphetamines to be addictive drugs. His definition of addiction was the same as that of the WHO in 1957. The symptoms of sleepiness, fa-

How does one define "addiction" or "dependency" when referring to new drugs being commonly abused by young people today? This author reviews the definitions of these terms as they have been used in relation to problems of amphetamine abuse and proposes new definitions for clarification so that the terminology for chronic drug abuse and its implications can be better understood. Doctor David was a Senior in the University of Missouri School of Medicine at the time this paper was written. He is now an Intern in the Department of Medicine, University of Missouri Medical Center.

tigue and depression were the criteria for his belief that amphetamines were addictive. These symptoms have not changed. Only the interpretations and the terms used to describe the symptoms have changed as one watches Connell's opinion evolve. It is interesting to speculate whether or not this scientist would still regard amphetamines as physically addictive drugs if the WHO had not decided to define all drug abuse in terms of dependence.

Brandon and Kiloh discussed amphetamine addiction and habituation in 1962, utilizing the 1957 WHO definition of these terms.⁹ They felt that most amphetamine abusers were simply habituated and that the majority of persons were not physically dependent upon these drugs. However, they did feel that some persons had withdrawal symptoms of a physical nature. These symptoms were the sleepiness, fatigue and depression with suicidal ideations that have been mentioned previously. No new withdrawal symptoms were put forth. Thus, by virtue of these same symptoms after drug withdrawal, these authors define amphetamine abuse as being addictive for some individuals. There must then be a basic difference between the criteria people use to define physical or physiological dependence. The same set of withdrawal symptoms are called physical dependence by some and psychological dependence by others.

In 1963, Oswald and Thacore made the statement that amphetamines are truly addictive.¹⁰ They based this statement on a study of six chronic amphetamine abusers. By performing electroencephalograms on these patients, they observed abnormal EEG sleep patterns for three to eight weeks after the drug was withdrawn. If the patient again began to take amphetamines, the EEG sleep patterns returned to normal. Therefore, these authors defined this neurophysiologic finding as an abstinence syndrome. With this abstinence syndrome, they then could label amphetamine abuse as being addictive, since it led to a physiological dependence as demonstrated by EEG.

(A question can be raised at this point: do other psychoactive drugs which are known to be nonaddicting cause abnormal EEG patterns when they are withdrawn from patients taking them chronically? Until this time, this question has not been answered.)

Thus, it is apparent that these authors have interesting evidence to support the idea that amphetamines can lead to physiologic dependence and, thus, can be considered addictive drugs.

However, this evidence is not completely understood and is still subject to scrutiny.

The problem of amphetamine abuse was further studied by C. T. Prout who wrote in 1964 that amphetamines "would seem to approach the requirements of an addictive drug."¹¹ He was using the 1957 definition of addiction by the WHO. He brought forth no new withdrawal symptoms, but rather emphasized that these same symptoms could be considered as physical dependence. The tendency of abusers to increase the dose of drug with time or tolerance was considered by Prout to be additional evidence that this drug could be called addictive. However, Prout did hedge his opinion by phrasing his statements with the words "seem" and "approach." Certainly, the use of these words demonstrates that he was indecisive.

Fourteen cases of amphetamine addiction were reported in 1965 by Durrant.¹² All of the patients had psychological problems before drug abuse was started, and all became addicted to amphetamines. When the drug abuse ceased, all of these patients had fatigue, sleepiness, depression and suicidal ideations. Because of these symptoms and because some of these patients renewed their amphetamine abuse later on, the author refers to them as addicted to amphetamines. Since he does not define addiction, one can only assume that his definition of the term is similar to that of the WHO in 1957.

In 1966, 18 cases of amphetamine abuse were reported by C. Walsh.¹³ In that report, the author took issue with the WHO contention in regard to its definition of amphetamine dependence. Specifically, he disputed its statement that there was no physical dependence or characteristic abstinence syndrome in amphetamine dependence. He did not believe that all 18 patients were addicted to amphetamines. However, he did have two patients who became psychotic after the drug was withdrawn and who remained psychotic for five to eight weeks. He did not consider these two patients schizophrenic, and he disputed Connell's contentions that any psychosis after one week of drug withdrawal is a psychosis unrelated to the drug withdrawal. He also had three patients who were anergic, fatigued, listless, had decreased drive and experienced psychotic episodes for three to four months after the amphetamines were discontinued. He, therefore, considers these patients with psychosis and those with fatigue and so forth to be addicted to amphetamines. The psychosis and physical symptoms are to be regarded as

proof of physical dependence and of the presence of an abstinence syndrome.

Several other authors have considered amphetamines to be addictive in some aspects. E. H. Ellinwood studied the personalities of amphetamine "addicts" in a federal hospital for addiction in 1967.¹⁴ Their personalities differed from those of other addicts because they exhibited more schizoid tendencies, were more sociopathic and demonstrated eccentric behavior traits. He did consider them to be addicted to amphetamines. However, even though they were in the same hospital for addiction problems, as were the heroin addicts and so forth, he did not differentiate their addiction from that of the narcotic addicts. Seelye, a psychoanalyst, reported in 1967 the successful treatment of amphetamine addiction in a schizophrenic woman.¹⁵ He believes there is no physiologic addiction. On the other hand, he believes that amphetamines are addicting but in a psychologic manner.

In 1967, D. Hawks reported a study of 74 amphetamine users and abusers.¹⁶ He did not define them as addicts. However, he did state that these patients could alternate the use of heroin and methylamphetamines without difficulties when they wanted to or were forced to. A question could then be raised as to whether or not a non-addicting drug could be adequately substituted for an addicting drug for any length of time without consequences. Could this nonaddicting substitute drug be addicting in ways similar but not identical to those of heroin?

In Noyes and Kolb's text, *Modern Clinical Psychiatry*, the authors refer to amphetamines as addicting drugs and they note the fact that addicts do exist.¹⁷ However, they do not specifically define the symptoms of physical dependence nor do they delineate any physiologic abstinence syndrome.

In this discussion of addiction, it is evident that the symptoms referred to as psychological dependence by some are called physiological dependence by others. At the same time, other authors consider amphetamines addictive for other reasons which may or may not fit into the 1957 WHO definition of addiction. Thus, the evidence for addiction is similar to that for dependency, and the definition of each term is not considered to be the same by everyone.

To further cloud the issue, let us consider how these words have been misused and how this misuse further adds to the confusion already in existence. In 1966, F. Lemere reviewed the problem of amphetamine use.¹⁸ He labeled the problem amphetamine dependency, but, on

the other hand, labeled some patients as amphetamine addicts. He also stated that chronic consumption of amphetamines could cause personality changes, psychoses and even irreversible brain damage. He stated that this evidence came from a "pool of addicts." Reviewing the Japanese problem with amphetamines after World War II, Lemere still referred to a study of 492 of these patients as addicts. C. Breitener reviewed this article written by Lemere. It was Breitener's contention that addiction to amphetamines is possible in some individuals, but that it is not the general rule. These opinions do very little to clarify the issue of dependency versus addiction. Kramer *et al* defined the problem simply as abuse.¹⁹ However, he went on to define an abstinence syndrome consisting of sleepiness, chronic fatigue, increased appetite and psychotic tendencies. Even though defining these symptoms as an abstinence syndrome, he did not commit himself to either the term addiction or dependency when labeling the effects of chronic amphetamine abuse. Finally, Smith and Blachly in 1966 reported a study on amphetamine use by medical students.²⁰ They did not believe that amphetamines caused physical dependence. However, they raised the question of whether or not chronic use of amphetamines would someday produce physician addicts.

These are just a few examples of how writers contradict themselves by using conflicting terminology. It also may indicate how few persons define addiction and dependence as the WHO does. All this tends to make the distinctions between the terms addiction and dependency more nebulous.

DISCUSSION

Although the definitions are not clear in everyone's mind and it is difficult to deal with the problem, several facts are apparent. First of all, people who have studied this problem are not in uniform agreement regarding whether or not amphetamines are addictive or dependent drugs. One reason for this disagreement is that these terms are misused. In addition, perhaps they are not defined broadly enough.

Secondly, that amphetamines are dependent drugs is a definition developed since 1964. However, the general public does not understand this definition of dependency for amphetamines. Therefore, questions arise in people's minds regarding the implications of the chronic use of amphetamines and how difficult is it to stop the

abuse of these drugs. To add to the confusion of the public, some scientists, as has just been discussed, dispute this definition and terminology. Therein lie the problems with the newer term.

Thirdly, the word addiction is the older term and is defined quite strictly in that there must be a physiological response to withdrawal of the drug. It seems that if investigators do not find physical symptoms as severe as in heroin withdrawal, then addiction comes into question. In addition, the physical symptoms of amphetamine withdrawal are neither too severe nor numerous. Therefore, some investigators have abandoned the word addiction with regard to amphetamines. Others have sought to redefine the term or have attempted to look at the concept of physical dependence differently. However, those investigators who favor the term addiction also consider criteria such as tolerance development and a high relapse rate in addition to physical dependence. They also seem to favor the term addiction because its connotations are far more serious and they feel the abuse of the drug is very dangerous.

A unique view of drug dependence is discussed by M. Seevers.²¹ According to Seevers, stimulants do not cause physical dependence, whereas depressants do cause such dependence. The reasons for psychological and physical dependence relate to theories of positive and negative reinforcement. When a drug whose effects are pleasurable is taken, positive reinforcement occurs. Therefore, psychological dependence develops out of this positive reinforcement. This continued positive reinforcement is all that is needed to lead to uncontrolled, compulsive, psychoactive drug abuse in a susceptible individual. On the other hand, when the drug has been taken chronically and a psychological dependence is present, abrupt removal of the drug may produce symptoms that act as negative reinforcers of continued drug use. For instance, if pain, nausea, vomiting and diaphoresis occur when drug-taking is stopped, then this drug abuse is negatively reinforced. In other words, the symptoms of physical dependence become a negative reinforcement for drug consumption. In addition, physical symptoms or physical dependence act in a secondarily psychological way to negatively reinforce chronic drug use.

It is apparent, then, by virtue of Seever's proposals that there are two mechanisms that act to maintain the phenomenon of chronic drug abuse. To summarize, positive reinforcement

primarily maintains psychological dependence and negative reinforcement maintains physical and, sometimes, secondary psychological dependence.

To help clarify the situation with regard to amphetamines, it might be wise to look at drug abuse of amphetamines from a reinforcement point of view. Psychological dependence upon amphetamine use is positively reinforced because the drug has good or pleasurable effects. Among these are alertness, euphoria, relief of depression and a feeling of enhanced ability to function. Persons who inject the drug intravenously describe a feeling such as "total body orgasm." Thus, taking the drug is positively reinforced, and a person develops a psychological dependence with continued use. However, when the drug is stopped after chronic use, negative reinforcement develops. In amphetamines, negative reinforcement operates in two ways: first, physical symptoms occur, such as sleepiness, fatigue, listlessness and increased appetite which, of course, are not pleasurable and tend to negatively reinforce amphetamine use. A physical dependence then develops even though it is mild when compared to the physical dependence of heroin. Secondly, psychosis and depression develop after drug use is stopped. These are not pleasant psychological symptoms, and they tend to negatively reinforce continued use of amphetamines. Therefore, a secondary psychological dependence develops along with a primary physical dependence due in both cases to negative reinforcement.

From this discussion of positive and negative reinforcement as it applies to amphetamine abuse, recommendations can be made which, hopefully, would better define the effects of all chronic drug abuse. First, the application of the words "drug dependence" to all drug abuse would be considered inadequate. Second, the terms "addiction" and "habituation" should be reinstated and also should be redefined. Since so many drugs are now abused and, no doubt, new drugs will be abused in the future, the terms "addiction" and "habituation" should be retained so that easy differentiation of drug effects can be ascertained. Yet, they should be redefined so that they are broad enough to be able to include new drugs and new drug abuse problems.

The primary distinction of an addicting drug would be that its continued abuse is both positively and negatively reinforced. The primary

(Continued on page 784)

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Synovial Chondromatosis of the Ankle

Case Report

SYNOVIAL CHONDROMATOSIS is an unusual, fascinating and rare condition in which cartilaginous or osteo-cartilaginous bodies form in the surface synovial membrane of joint, tendon sheath or bursa. These bodies may remain attached to the synovial membrane by a pedicle or become detached and lie free in the joint space. The synovial fluid nourishes the loose bodies which can remain viable and increase in size.^{1, 2}

The etiology of synovial chondromatosis is unknown. It is a rare arthropathy most commonly involving the knee, elbow or hip. It rarely develops within the shoulder or ankle joint. There were 11 cases diagnosed as chondromatosis reported by Paul and Leach³ at the Lahey Clinic from 1936 to 1966. The hip was involved in four patients, the knee in three, the shoulder in two and the ankle in one. Murphy *et al*⁴ of Mayo Clinic reported the largest series of 32 cases. The knee was affected in 22, the hip in five, the elbow in two and the ankle, shoulder and wrist in one each. They reported a classic case affecting the second metacarpo-phalangeal joint. In all cases, the disease was monoarticular. Synovial chondromatosis appears in all age groups, but is more common in males than in females. A history of antecedent trauma is not always elicited.

A diagnosis of synovial chondromatosis can be made only if it fulfills the exacting criteria as defined by Jaffe.⁵ There must be macroscopic and microscopic foci of cartilagenous formation in the involved synovium. The other names used for synovial chondromatosis are osteo-chondromatosis, synovial osteochondromata, osteo-chondromatosis, joint chondroma and diffuse enchondroma or chondromatosis within the joint capsule. The conditions most commonly confused with synovial chondromatosis include degenerative arthritis, neurotrophic arthritis, osteo-chondritis dissecans, osteochondral fractures and possibly rheumatoid arthritis. The above conditions may form loose bodies. In none, however,

The authors report the third case of proven synovial chondromatosis of the ankle for the literature. In view of present knowledge and the rarity of this condition, they recommend the surgical method of choice for symptomatic cases with the presence of radio-opaque loose bodies. The authors are from the Veterans Administration Hospital at Jefferson Barracks where Doctor Torres is Chief of Pathology Service, Doctor Jack is Staff Physician and Doctor Russell is Consultant in Orthopedics. Doctor Wee, who is now in private practice, was Chief of Surgical Service at the time this paper was written.

is there evidence of metaplastic cartilaginous foci demonstrated within the synovium.

CASE REPORT

The patient is a 20-year-old Negro man, who reported that in 1966, while playing football, he twisted his right ankle. The ankle became swollen and painful. He hopped around for one month. After that, the swelling and pain subsided. X-ray of the right ankle was reported as negative. In May, 1968 while in the military service, he walked quite a bit and the right ankle again started to swell and was painful. The corpsman wrapped his ankle with an ace bandage. X-ray of the ankle was taken again and was still negative. In May of 1969, he had three episodes of the ankle locking. Movement of the ankle would unlock it. After his discharge from the service in April of 1970, he was admitted to the Jefferson Barracks Veterans Administration Hospital. Upon examination, the right ankle was swollen and tender. Loose bodies were readily palpable. Radiographs of the right ankle revealed the presence of multiple radio-opaque bodies in the ankle joint (Fig. 1).

With the patient under general anesthesia, the right ankle was explored while a pneumatic tourniquet was applied at the right thigh. A longitudinal incision was made along the medial side of the anterior tibialis tendon, which was retracted. The



Fig. 1 Presence of multiple radio-opaque bodies in the joint in the right ankle.

synovium, which was boggy and irregular, had several loose bodies still attached to it by thin stalks. It was incised and about 30 cc of mucoid fluid were aspirated. Greyish-white round and oblong loose bodies (Fig. 2) measuring 1 cm to 2 cm were removed. The rest of the loose bodies were removed by pressure over the plantar surface and irrigation with normal saline. Postoperative x-ray revealed absence of loose bodies. As much of the synovium was excised as possible (Fig. 3). The synovium was closed with continuous 3-0 chronic catgut and the skin with 3-0 silk. Pressure dressing and ace bandage were applied. The patient was placed on complete bed rest with elevation of the leg for one week. After that, he walked on crutches for three weeks without weight bearing. He was seen six months after the operation and he did not complain of further discomfort.

Histologically, the synovia presented rather vascular papillary projections with edema and lymphocytic infiltration (Fig. 4). Elsewhere, there were well demarcated nodules of osteo-cartilage showing varying degrees of calcification and bone formation (Fig. 5) as evidence of metaplastic process of the synovia.

DISCUSSION

Synovial chondromatosis has an insidious onset. Typically, the patient notes intermittent pain



Fig. 2 Gross specimen of loose bodies, measuring 1 cm to 2 cm. Note synovium with loose bodies still attached by stalks (bottom).



Fig. 3 Synovia, removed from the ankle joint, showing irregular surfaces.

and swelling of the involved joint which, over a period of years, gradually leads to limitation of motion and occasional locking or catching or giving way. The pain and limitation of motion may eventually result in muscle atrophy and weakness. Physical examination will reveal an enlarged joint with an effusion or a boggy synovium, crepitation, limitation of motion, tenderness and palpable loose bodies may be noted.

Roentgenographically, the majority of loose bodies are composed of cancellous bone or cal-

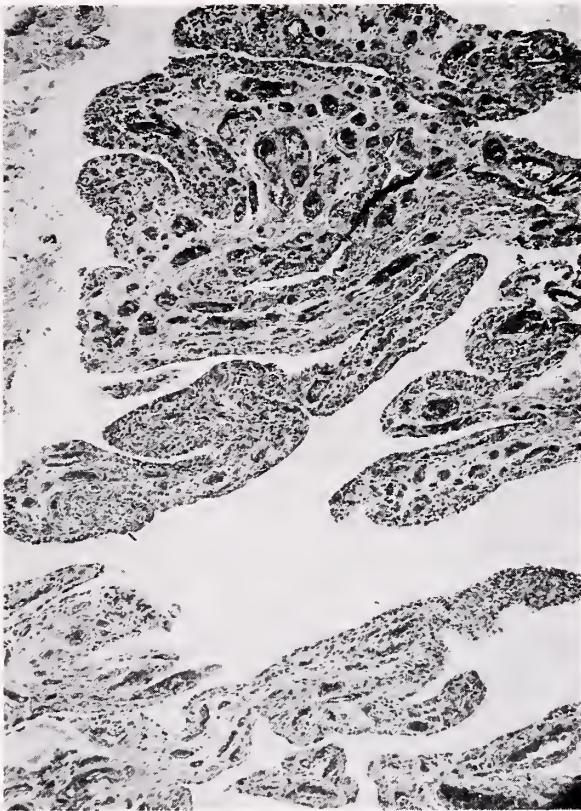


Fig. 4 Synovia forming vascular projections showing chronic inflammatory reaction (H & E $\times 90$).

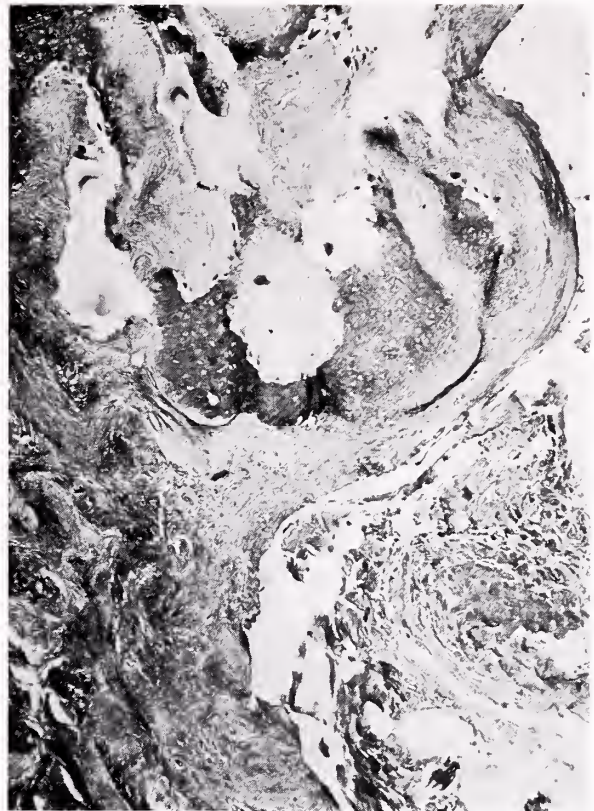


Fig. 5 Synovia osteo-cartilage arranged in well demarcated nodules (H & E $\times 90$).

cified cartilage readily visible on roentgenograms. The loose bodies are not invariably visible on routine roentgenograms. Those composed of uncalcified cartilage are not seen at all. If this condition is suspected, Bloom and Pattison⁶ recommended an arthrography of the involved joint which will delineate the nonopaque loose bodies and determine the extent of the disease process.

Stewart⁷ stated that "in one of my cases, I removed the synovial membrane which looked normal on inspection, but which, upon microscopy, revealed miliary enchondromata." Therefore, it is recommended that the pathologist make many serial sections of the removed synovial membrane before deciding against the diagnosis of this disorder.

Paul *et al*³ stated that the natural course of synovial chondromatosis varies. In some patients, it becomes progressively disabling and further loose bodies form so that some type of operative procedure has to be performed. In others, it begins as an active process and then becomes quiescent. McIvor and King⁸ believed that the condition is self-limited and that eventually the metaplastic activity of the synovium ceases. If

the disease were progressive, they argue, any treatment short of total synovectomy, a technical impossibility, would be followed by recurrence. Jeffreys⁹ supported this thesis. The possibility that the bodies may lose radio-opacity and not dissolution has not been excluded.

In the light of our present knowledge of this condition, the recommended surgical procedure varies little. McIvor and King,⁸ in their article on the treatment of osteochondromatosis of the hip in 1962, remarked that the surgical technique has included dislocation of the femoral head, complete removal of loose bodies and subtotal excision of the involved synovial membrane.

In 1962, Murphy, Dahlin and Sullivan⁴ of the Mayo Clinic mentioned their extensive experience and concluded that the surgical treatment should consist in removal of the loose bodies and synovectomy of the involved synovial membrane as much as technically possible. In 1970, Paul and Leach of Lahey Clinic published in their article, "Synovial Chondromatosis of the Shoulder," the conclusion that the disease may

be self-limiting and that removal of the loose bodies may be all that is necessary at operation.

SUMMARY

This is the third case of proven synovial chondromatosis of the ankle reported in the literature. The operative technique is briefly described. The criteria for the diagnosis of this condition set by Jaffe are mentioned. In light of our present knowledge and the rarity of this condition, we recommend that in symptomatic cases with the presence of radio-opaque loose bodies, surgical exploration of the involved joint be done with complete removal of loose bodies and partial synovectomy of the involved synovia as the method of choice.

Acutely Injured Hand

(Continued from page 770)

which is tissue oriented, i.e., skin, bone, joint, nerve and tendon. Indications for and methods of skin replacement, bony fixation, nerve and tendon repair have been presented. The importance of maintaining supple joints has been stressed.

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Amphetamines

(Continued from page 780)

distinction of an habituating drug should then be that its continued abuse is only positively reinforced. Using these distinctions as guidelines, the problem of the terminology applied to amphetamine use would be quite clear. With these criteria of positive and negative reinforcement, amphetamines would certainly be classified as addictive drugs.

CONCLUSIONS

Having set out to clarify the problem with respect to amphetamine dependence or addiction, the author concludes that the clarification rests with redefining addiction and habituation in terms of positive and negative reinforcement. As the discussion in this paper demonstrates, neither the present definitions of dependence or addiction are adequate. Hopefully, basic criteria and guidelines can be established by utilizing the concept of reinforcement so that a common ground might exist to define the effects of chronic drug abuse.

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Special X-ray Exhibit

SIDNEY RUBIN, M.D., RODGER LAMBIE, M.D. and
EDWIN HERMAN, M.D., *Kansas City*

Radiologic Problem Case

THE PATIENT is a 36-year-old Negro man who was seen in the emergency room complaining of left chest and left flank pain. A temperature of 100 F (38.9 C) was recorded. The symptoms had been present for approximately 24 hours. There was no history of trauma. An electrocardiogram was not remarkable. The patient was admitted for evaluation.

Past History: The patient had a hemorrhoidectomy in 1961. There was no previous history of cardiorespiratory or genitourinary illness.

Laboratory Data: An initial urine analysis revealed a specific gravity of 1.009, 3-5 red blood cells, and 3+ proteinuria.¹ Hemoglobin was 15.2/gm/100 ml; hematocrit, 42%; and white blood cell count of 10,600/cu mm. Total serum cholesterol was greater than 500 mg/100 ml. The serum albumin was 2 gm/100 ml with total proteins measuring 5 gm/100 ml. Hemoglobin electrophoresis, as well as sickle cell preparation, revealed no evidence of sickle cell disease.

Radiologic Examination: On plain film of the abdomen, the left kidney was larger than the right. Intravenous pyelogram (Fig. 1) revealed symmetrical function of the kidneys with less volume noted on the left. The left renal pelvis was never clearly defined and the infundibula appeared spotty suggesting edema of the renal parenchyma. Retrograde pyelogram depicted diffuse alteration of the collecting system. Lack of distensibility of the infundibula was apparent.

Hospital Course: The patient continued to have left flank pain with persistent proteinuria. A renal scan and flow study revealed decrease in vascular flow to the left kidney. A selective left renal arteriogram (Fig. 2) demonstrated normal arterial pattern with no evidence of mass lesions or distortion of the arteriovascular pattern. During the venous phase (Fig. 3), a filling



Fig. 1 IVP—The left kidney is larger than the right with poor definition of the renal pelvis.

defect was seen in the left renal vein. There was a marked prolongation of the nephrogram in the midportion of the left kidney.

Differential Diagnosis:

1. Renal vein thrombosis, questionable etiology.
2. Chronic glomerulonephritis or acute pyelonephritis.
3. Left renal tumor.

Surgical Procedure: Surgery was performed, and an organized thrombus was found in the left renal vein with extension up the inferior vena cava for approximately 1 cm to 2 cm. This

* The authors are from the Department of Radiology, Menorah Medical Center, where Doctor Rubin is Chairman. They were assisted by Frank Mantz, M.D., pathologist. This is the seventh article in this series.

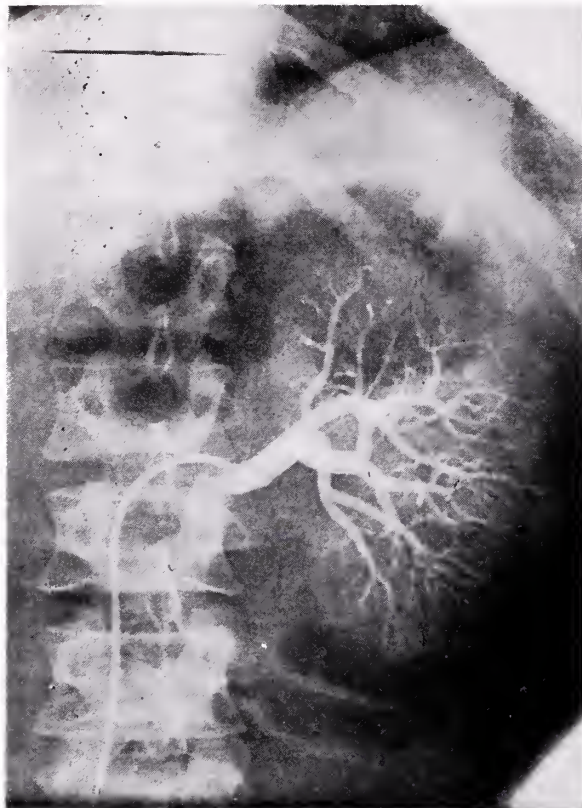


Fig. 2 Normal selective left renal arteriogram.



Fig. 3 Late stage of arteriogram: Persistent nephrogram with filling defect in the left renal vein.

was removed, and normal blood flow was restored. A needle biopsy of the left kidney also was performed at the time of surgery.

Pathological Diagnosis:

1. Organizing thrombus, left renal vein.
2. Biopsy revealed changes of early membranous glomerulitis.

Discussion: Renal vein thrombosis was described over a century ago. However, it became an important consideration only when recognized as a cause of the nephrotic syndrome.² There are multiple possible etiologies for such an entity. Most commonly, the thrombosis is secondary to disease of the renal parenchyma such as glomerulonephritis, amyloidosis, diabetic glomerulosclerosis or even renal tumor. Perirenal conditions, such as perinephric abscess or retro-

peritoneal tumors, may extend into the venous system and cause renal vein thrombosis to develop (primary thrombosis). Trauma, however, must always be excluded as a predisposing factor.

Unilateral or bilateral enlarged kidneys in a patient possessing a nephrotic syndrome strongly suggest an inflammatory process or renal vein thrombosis.³ The presence of a functioning kidney in the intravenous pyelogram does not preclude the diagnosis of renal vein thrombosis.

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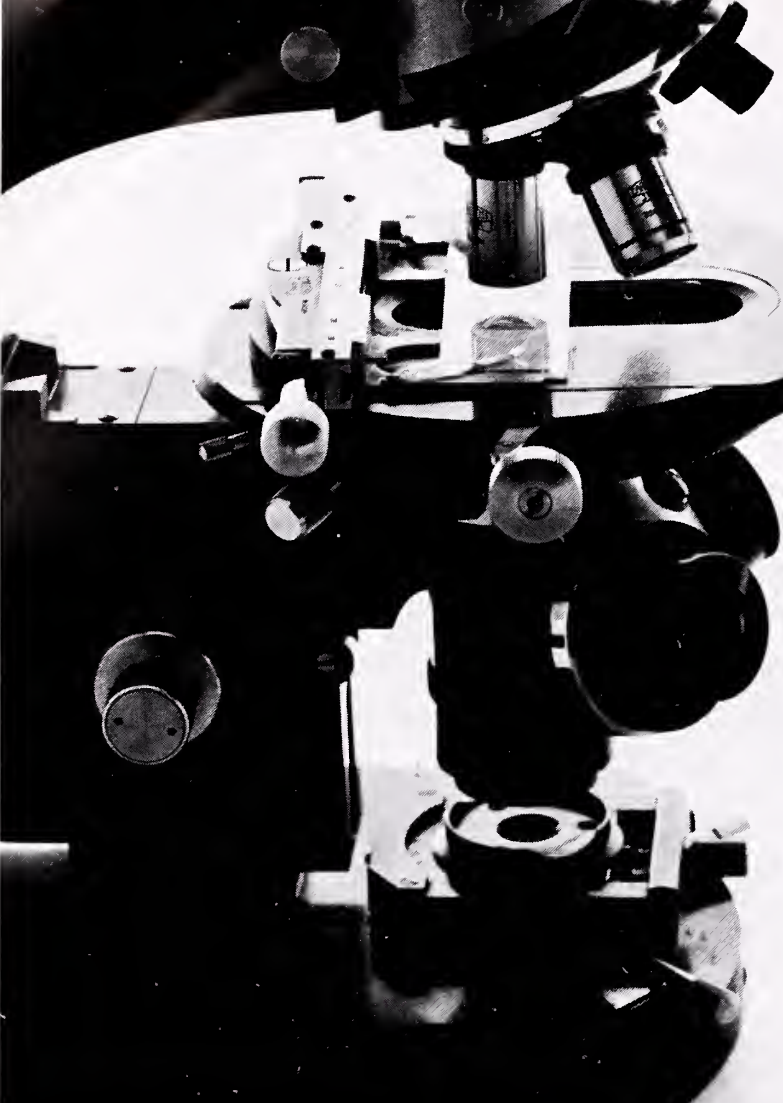
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foliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia, allergic myocarditis. *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis, stomatitis. *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria. Periarthritis nodosa and L.E. phenomenon have occurred with sulfonamide therapy. Sulfonamides bear certain chemical similarities to some goitrogens, diuretics and oral hypoglycemic agents. Goiter production, diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. Cross-sensitivity may exist with these agents.

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President's Message

Today (1970), medical care dollars are estimated at 67.2 billion or 7.0% of the GNP. Federal estimates of \$105 billion by 1974 as the health care output are perhaps realistic, depending upon the impact of administrative anti-inflationary effort and what the American people ultimately decide they want in the form of national health insurance. Inescapably, the subject of health care will continue for some time to come, due to its remarkable sex appeal to politicians, social architects and the man on the street, the patient.

Criticism, commonly a means of keeping institutions, governing bodies and people on their toes, is a major ingredient of progress if it is constructive and catalytic. Medicine does not stand alone in its magnetism for criticism. Ponder for a moment the plight of the railroads, the air transport system, the educational system, the unions, the churches—yes, even the body politic—to mention a few. However, criticism leveled today at health care in America is attended by something much more ominous, namely, the destruction of an entire health care delivery system. From these social architects, there are being delivered a host of suggested systems to replace the current pluralistic health care delivery system. In this regard, I urge you to read "Health Care in America; A Heretical Diagnosis" by Harry Schwartz, in the Aug. 14, 1971 issue of *Saturday Review*.



Gerald L. Miller, M.D.

The current pluralistic health care delivery system and evolutionary product of decades of American medicine surely in many, and perhaps most, areas of the United States is the best in the world. Nonetheless, our system has its many weaknesses. These must be identified and appropriate correction implemented if the system is to be preserved. A look at most of the nationalized health programs of the world, of which we have some knowledge, makes the challenge, in deference to our youth and our patients, worth accepting with enthusiasm.

Distribution of health care is a prime priority. This possibly can be resolved in the current system by fiscal incentive, but, I am inclined to believe, much more effectively by physician motivation. Needless to say, this problem is not as much related to reported manpower shortage as it is to appropriate distribution of existing manpower. Certainly, this difficult problem would be significantly minimized in any event with considered priority attack on the social problems of education, food, clothing and shelter.

Although the physician receives only an estimated 15 cents of the health care dollar, he is under singular attack for the marked escalation of health care costs. This responsibility should properly be vested in the physician for, in essence, he is the director of care. However, factors beyond his control have largely been responsible for cost increase. They are inflation, increased costly hospital care (labor), increasing population, increasing availability of services and technological advances. These factors, in addition to the increasing involvement of public funds (federal and state, 35% of the health care dollar), are largely responsible for the spiraling costs of health care. In response to criticism, why will the existing health care delivery system break down if not altered, expanded or embellished? First, health is a 24-hour-a-day, seven-day-a-week business. If patients are not seen because of shorter office hours and poor coverage, if hospitals at \$100 a day don't become functional seven days a week, if emergency rooms with their surcharge and duplication of service charges aren't corrected, major change in the health care delivery system would seem to be inevitable.

In 1959, approximately 7,000 students were graduated from medical schools in the United States. In 1970, there were approximately 12,000. Projected into the next ten years, there will be graduated approximately 20,000 young medical students per year. Medical manpower needs, with an annual estimated population increase, are surely being appropriately planned and accommodated. Rural areas with excellent facilities will attract groups of young, motivated physicians at appropriate geographic distributions where high level, top quality medical care can and will be developed for the rural community. Metropolitan physicians, through strong leadership at the county medical society, can develop capable patient coverage systems and insist upon efficient seven-day utilization of the sophisticated hospital system with the cooperation of hospital administrators. Surely, a motivated mechanism of health care delivery within the ghetto, inner city and rural areas can be developed within the existing pluralists delivery system.

Broad prepayment capitation programs with rare exception will, in my opinion, not accomplish effective change in the health care delivery system without major sacrifice in the quality of health care. The existing pluralistic health care delivery system, of which we are a part and preponderantly support, has the capacity to treat effectively most of its illnesses before collapse. However, the question must be asked—will the constituents of this current system rise to the challenge of change or is it too affluent, too preoccupied? Where is the motivation? The hour is late.

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EDITORIALS

A FORMULA OF FAITH

(Dr. Robert Nelson Crews of Fulton, a member of the Missouri State Medical Association since 1908, celebrated his 100th birthday on Sept. 11, 1971. In 1966, Doctor Crews said, "The practice of medicine is not all science. There is an art in relieving human ills. Faith is involved. The patient's mental and emotional problems must be treated as well as his physical ailments." The following editorial concerning his philosophy was printed in the Fulton Kingdom Daily News on March 31, 1971 and is reprinted here with permission of the newspaper.)

Tuesday's paper included some words of wisdom from Dr. R. N. Crews of Fulton who was presented with a red carnation in honor of Doctor's Day.

Since Dr. Crews can speak from over 99 years of experience, his words are well worth repeating.

The secret of a long life he said, is to have "faith in the present and future and in God and man."

Such a philosophy could carry us all a long way.

Consider the four things Dr. Crews mentioned as deserving of faith.

1. Faith in the present. How many times have we heard people running down the present in favor of "the good old days" or the ways things should be "when my ship comes in." The present is the only time for which we are responsible. If there are things to criticize in the present, it is ourselves that we criticize. Having faith in the present is having faith in ourselves.

2. Faith in the future. Some say the country is going to the dogs. Maybe it is, but one way to make sure it gets there is to bury ourselves in pessimism.

The young people of our area are ample assurance that a bold and happy future lies ahead if only we will expect it and work for it.

3. Faith in God. The surest way to get caught in the swamp of despair is to limit what we expect by what man alone can do. Only faith in God provides the unlimited optimism that has allowed man to rise above the cave and become the master of the earth.

4. Faith in man. There are many who will say that God is all right, but man is in such a bad way that we might as well give up hope. Eventually man will destroy his habitat either through nuclear war or environmental pollution. Such a way of thinking leads only to defeat. Man has always had the potential to be better than he ought to be by any reasonable standard. Who knows what man's true potential is?

Four points to ponder—Have faith in the present and the future, in God and man. Thank you, Dr. Crews, for giving us these things to think about and act upon.

Kingdom Daily News, Fulton

THE AMA DROPOUT

At the recent AMA convention in Atlantic City, some startling facts were reported, which if accurate would be of concern to all physicians. In New York, 9,000 practicing physicians were said to have discontinued membership in the AMA after this membership was no longer tied to membership in the state association. The AMA would then be left with less than half of the practicing physicians in the U. S. as members.

It was further reported that only one member of the AMA House of Delegates is below age 40 and that the average age in the House is 59-plus years. Also, the House was said to have members representing all points of view except the "far-out left." One surmises that the extreme right is represented.

The pity of these reports lies in the shortsightedness not only of the 9,000 dropouts, but also the

"mature" members of the House. The AMA dues increase, coupled with a public relations campaign to enhance the image of organized medicine, was the point of objection in New York. The system of electing delegates is at fault in the House.

Logically, if one considers membership in an organization with state goals compatible with one's own goals, one can see that it requires more participation, not less, to make sure that the organization is constantly molded to pursue those goals. If the AMA was founded to improve medical education and thereby patient care, why would a reasonable member leave? Perhaps it is because the system of electing delegates (who do not represent a constituency) permits practically no turnover in the makeup of the delegation until a delegate announces he wants to retire. Fresh ideas can emerge only

rarely if new faces with fresh minds are not seen.

The Kansas City area is blessed with a particularly effective delegate, Hector Benoit. As were the other three Missouri delegates, Doctor Benoit was elected by his state association House of Delegates at its annual meeting. But in spite of this locally fortunate circumstance, the AMA House of Delegates is in essence a closed club whose members are long past the age of innovative thinking and aggressive energy.

If those 9,000 New York physicians would use their political muscle in their own state association affairs, they would find the chance to improve the lot of all of us. If they agreed that change was desirable, nothing would stop them.

Many of us feel that all viewpoints should be represented in a meaningful organization, with the "extreme left" (which is pretty far to the right of

Chinese Communism) just as important as the "extreme right" (which is pretty far to the left of Franco's Spain).

All physicians should recognize the desirability of having an organization which serves as an enforcer of educational standards, ethical principles and good medical practice. The AMA is all of these. However, it needs constructive change, as do all groups. The House of Delegates should recognize this and urge the state organizations to allow balloting on national delegates by individual members. We may yet attract enough new blood to save an AMA-disgusted public from adopting unreasonable systems of delivering health care.

ANDREW McCANSE, M.D., Editor
The Greater Kansas City Medical Bulletin

COMMENT . . .

Our Readers Write

MALPRACTICE PROBLEM SOLUTION

Dear Editor:

I am currently a physician practicing in Iowa, but since I am a former resident of Missouri and am currently licensed to practice in the state of Missouri, I would like to relate to you how we are attempting to improve the malpractice problem in Iowa through state legislation.

Our County Medical Society has proposed enactment of a mid-European type of law, which provides that the losing party in civil litigation pays not only court costs, but also reasonable fee to the winning party's attorney. This would replace our present archaic state law, which does not compensate an innocent, successful defendant in civil litigation for false accusations made against him by an unscrupulous or ill-informed plaintiff. At present, each party usually pays his own attorney's fee. This present system is an inducement for a plaintiff to sue, even though his complaint is of an unjust or frivolous nature. A plaintiff has little to lose except meager court costs if his suit is unsuccessful, as he usually

has engaged his attorney on a contingent fee basis. On the other hand, if successful, the plaintiff's rewards may be tremendous even though the plaintiff's attorney receives one third to one half of any court settlement.

If the above legislative change were enacted, much of the incentive for a plaintiff to sue would be lost, unless there were a justifiable complaint. It has been estimated that 50% to 80% of all malpractice suits would be eliminated as a result of the above legislative change. Consequently, insurance rates would be considerably reduced and the right for justifiable complaint and suit would be maintained.

I feel that the above proposal is a positive and constructive approach to our current malpractice problem and am hopeful that additional local and state medical societies throughout our country will give consideration to and promote such a change.

Sincerely,
Earl J. McKeever, M.D.
305-07 South Third St.
Knoxville, Iowa 50138



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| Oct. 13-14 | Non-Surgical Medical Emergencies
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Columbia 65201 |
| Oct. 13-15 | Comprehensive Care for Neurological Disorders
Danciger Institute for Health Sciences
Menorah Medical Center, Kansas City 64110 |
| Oct. 19-20 | Medicine and Religion: The Middle Years
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Oct. 21-22 | Cardiopulmonary Resuscitation Training Course for Instructors
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Nov. 5-6 | M.D. Day
Missouri-Oklahoma Faculty
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Nov. 8-11 | Symposium: Internal Medicine
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Nov. 17-18 | Problems of the Eye: Intrinsic and Systemic Diseases
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Nov. 17-19 | Recent Clinical Advances in Pediatrics
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| Nov. 17-19 | Symposium: Medical Technology
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Warnings: May impair alertness; operation of automobiles and other activities made hazardous by diminished alertness should be avoided. If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed; erythema multiforme, including Stevens-Johnson syndrome (with a fatal case), has been associated with thiabendazole therapy in children. Safe use in pregnancy or lactation has not been established.

Precautions: Since thiabendazole is metabolized in the liver and excreted by the kidneys, hepatic and renal function should be carefully monitored in patients with dysfunction of these organs.

Adverse Reactions: Frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress,

pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, collapse, abnormal sensation in eyes, blurring of vision, hyperirritability, numbness, hyperglycemia, xanthopsia, enuresis, perianal rash, cholestasis and parenchymal liver damage, hypotension, and a transitory rise in cephalin flocculation and SGOT. Hypersensitivity reactions include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy. Appearance of live Ascaris in the mouth and nose has been reported on rare occasions.

Some patients may excrete a metabolite which imparts an odor to urine, much like that which occurs after ingestion of asparagus. Crystalluria without hematuria has been reported on occasion, but has promptly subsided with dis-

continuation of therapy; while the etiologic role of thiabendazole has not been established, the possibility of crystalluria should be kept in mind. Transient leukopenia has been reported in a few patients, but the cause and effect relationship in these cases has not been established.

NOTE: In children weighing less than 30 pounds, clinical experience with thiabendazole for treatment of intestinal parasitosis has been limited. Thus, the benefits of this therapy should be weighed against the possibility of adverse reactions.

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County Society News

FIRST DISTRICT

COUNCILOR

JOHN N. MARTIN, M.D., ST. JOSEPH

BUCHANAN COUNTY MEDICAL SOCIETY

Continuing a custom began in 1908, the Buchanan County Medical Society held its first fall meeting at the St. Joseph State Hospital on September 1. Dr. Liam O'Brien, superintendent, extended greetings to the 46 physicians who were present.

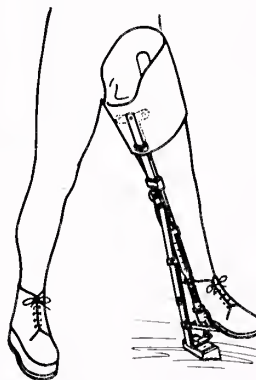
Guest speaker for the event was Dr. William V. McKnelly, Jr., associate professor of psychiatry at the University of Kansas School of Medicine and Director of the School's Methadone Clinic. He discussed "Drug Abuse Problems in Children."

Doctor McKnelly noted the "out of proportion" growth of drug use on the East and West Coasts, particularly in the adolescent age group, and stated that the pattern would follow in the Midwest. He urged the physicians to support drug control programs and, especially, to support programs on drug education.

Dr. Richard O. Craig, program chairman, introduced the speaker. Dr. Sharon E. Waggoner presided at the meeting and business session.

RANDAL W. WEED, M.D., *Secretary*

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New Members

Donald H. Beisner, M.D., 600 S. Glenstone, Springfield, has become a member of Greene County Medical Society. Dr. Beisner is a native of Cedar Falls, Iowa, received his preliminary education at Iowa State College and his M.D. degree at the State University of Iowa in 1964. He specializes in ophthalmology.

Andrew A. Dahl, M.D., 500 Northwest Plaza, St. Ann, has become a member of St. Louis County Medical Society. Dr. Dahl is a native of Shanghai, China, received his preliminary education at Wesleyan University and his M.D. degree at Cornell University in 1966. He specializes in ophthalmology.

Abdollah Gilani, M.D., 410 Superior, Excelsior Springs, has become a member of Clay County Medical Society. Dr. Gilani is a native of Resht, Iran, received his preliminary education at the University of Goettingen and his M.D. degree at the University of Hamburg in 1962. He specializes in surgery.

Winston E. Harrison, M.D., 201 W. Broadway, Columbia, has become a member of Boone County Medical Society. Dr. Harrison is a native of Richland, and received his M.D. degree at the University of Missouri in 1961. He specializes in urology.

Alan L. Hoffmann, M.D., Prospect at Meyer Blvd., Kansas City, has become a member of Jackson County Medical Society. Dr. Hoffmann is a native of Brooklyn, N. Y., received his preliminary education at Bethany College and his M.D. degree at the University of Kansas in 1966. He is in family practice.

Anita M. Isaac, M.D., Lester E. Cox Medical Center, Springfield, has become a member of Greene County Medical Society. Dr. Isaac is a native of Hays, Kan., received her preliminary education at Kansas University and her M.D. degree at Kansas University in 1949. She specializes in physical medicine and rehabilitation.

Joseph C. Johnson, Jr., M.D., 1211 S. Glenstone, Springfield, has become a member of Greene County Medical Society. Dr. Johnson is a native of Houston, Tex., received his preliminary education at the University of Oklahoma and his M.D. degree at the University of Texas in 1966. He specializes in obstetrics and gynecology.

Tae Hung Lee, M.D., 24th & Cherry, Kansas City, has become a member of Jackson County Medical Society. Dr. Lee is a native of Seoul, Korea, received his preliminary education at Chosen Christian University and his M.D. degree at Severance Medical College in 1957. He specializes in internal medicine (nephrology).

Ruel Taay Miciano, M.D., 2310 E. Linwood Blvd., Kansas City, has become a member of Jackson County Medical Society. Dr. Miciano is a native of Mindoro, Philippines, received his preliminary education at Far Eastern University and his M.D. degree at Far Eastern University in 1966. He is in general practice.

Ralph L. Nicholson, M.D., Cox Medical Center, Springfield, has become a member of Greene County Medical Society. Dr. Nicholson is a native of Hardin, received his preliminary education at McPherson College and his M.D. degree at St. Louis University in 1946. He is in general practice.

James Alan Reynolds, M.D., 55 Goethals Dr., Fort Leonard Wood, has become a member of St. Louis County Medical Society. Dr. Reynolds is a native of South Bend, Ind., received his preliminary education at Taylor University and his M.D. degree at Washington University in 1965. He specializes in internal medicine.

Norman J. Schreiber, M.D., 642 S. Hickory Place, Springfield, has become a member of Greene County Medical Society. Dr. Schreiber is a native of Trenton, received his preliminary education at the University of Colorado and his M.D. degree at Northwestern University in 1942. He is in general practice.

Emanuel Tanne, M.D., 500 Northwest Plaza, St. Ann, has become a member of St. Louis County Medical Society. Dr. Tanne is a native of Newark, N. J., received his preliminary education at Columbia University and his M.D. degree at the State University of New York in 1962. He specializes in ophthalmology.

Reynaldo R. Tiojanco, M.D., 1102 130th, Grandview, has become a member of Jackson County Medical Society. Dr. Tiojanco is a native of the Philippines, received his preliminary education at the University of Santo Tomas and

his M.D. degree at the University of Santo Tomas in 1965. He is in general practice.

Gerald F. Tuohy, M.D., Wornall Rd. at 44th, Kansas City, has become a member of Jackson County Medical Society. Dr. Tuohy is a native of Minnesota, received his preliminary education at the University of Minnesota and his M.D. degree at the University of Minnesota in 1959. He specializes in anesthesiology.

Thomas J. Young, M.D., 4240 Blue Ridge Blvd., Kansas City, has become a member of Jackson County Medical Society. Dr. Young is a native of Inglewood, Calif., received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1967. He specializes in ophthalmology.

In Memoriam

Lowrey, Ford J., M.D., Kansas City, a graduate of Washington University, 1921; member Jackson County Medical Society; age, 74; died July 29, 1971.

Efron, Joseph, M.D., St. Louis, a graduate of the Medical College of the State of South Carolina, 1948; member St. Louis County Medical Society; age, 47; died Aug. 8, 1971.

Bequette, Theodore C., M.D., Boonville, a graduate of Northwestern University, 1925; member Cooper County Medical Society; age, 71; died Aug. 14, 1971.

Koehler, Charles A., M.D., Shawnee Mission, Kan., a graduate of Creighton University, 1923; member Jackson County Medical Society; age, 73; died Aug. 22, 1971.

McKinstry, Karl V., M.D., De Soto, a graduate of Washington University, 1934; member Jefferson County Medical Society; age, 61; died Aug. 24, 1971.

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Pre-Sate (chlorphentermine hydrochloride) is indicated in exogenous obesity, as a short term (i.e. several weeks) adjunct in a regimen of weight reduction based upon caloric restriction.

Contraindications

Glaucoma, hyperthyroidism, pheochromocytoma, hypersensitivity to sympathomimetic amines, and agitated states. Pre-Sate (chlorphentermine hydrochloride) is also contraindicated in patients with a history of drug abuse or symptomatic cardiovascular disease of the following types: advanced arteriosclerosis, severe coronary artery disease, moderate to severe hypertension, or cardiac conduction abnormalities with danger of arrhythmias. The drug is also contraindicated during or within 14 days following administration of monamine oxidase inhibitors, since hypertensive crises may result.

Warnings

When weight loss is unsatisfactory the recommended dosage should not be increased in an attempt to obtain increased anorexic effect; discontinue the drug. Tolerance to the anorectic effect may develop. Drowsiness or stimulation may occur and may impair ability to engage in potentially hazardous activities such as operating machinery, driving a motor vehicle, or performing tasks requiring precision work or critical judgment. Therefore, such patients should be cautioned accordingly. Caution must be exercised if Pre-Sate (chlorphentermine hydrochloride) is used concomitantly with other central nervous system stimulants. There have been reports of pulmonary hypertension in patients who received related drugs.

Drug Dependence Drugs of this type have a potential for abuse. Patients have been known to increase the intake of drugs of this type to many times the dosages recommended. In long-term controlled studies with the high dosages of Pre-Sate, abrupt cessation did not result in symptoms of withdrawal.

Usage In Pregnancy The safety of Pre-Sate (chlorphentermine hydrochloride) in human pregnancy has not yet been clearly established. The use of anorectic agents by women who are or who may become pregnant, and especially those in the first trimester of pregnancy, requires that the potential benefit be weighed against the possible hazard to mother and child. Use of the drug during lactation is not recommended. Mammalian reproductive and teratogenic studies with high multiples of the human dose have been negative.

Usage In Children Not recommended for use in children under 12 years of age.

Precautions

In patients with diabetes mellitus there may be alteration of insulin requirements due to dietary restrictions and weight loss. Pre-Sate (chlorphentermine hydrochloride) should be used with caution when obesity complicates the management of patients with mild to moderate cardiovascular disease or diabetes mellitus, and only when dietary restriction alone has been unsuccessful in achieving desired weight reduction. In prescribing this drug for obese patients in whom it is undesirable to introduce CNS stimulation or pressor effect, the physician should be alert to the individual who may be overly sensitive to this drug. Psychologic disturbances have been reported in patients who concomitantly receive an anorectic agent and a restrictive dietary regimen.

Adverse Reactions

Central Nervous System: When CNS side effects occur, they are most often manifested as drowsiness or sedation or overstimulation and restlessness. Insomnia, dizziness, headache, euphoria, dysphoria, and tremor may also occur. Psychotic episodes, although rare, have been noted even at recommended doses. **Cardiovascular:** tachycardia, palpitation, elevation of blood pressure. **Gastrointestinal:** nausea and vomiting, diarrhea, unpleasant taste, constipation. **Endocrine:** changes in libido, impotence. **Autonomic:** dryness of mouth, sweating, mydriasis. **Allergic:** urticaria. **Genitourinary:** diuresis and, rarely, difficulty in initiating micturition. **Others:** Paresthesias, sural spasms.

Dosage and Administration

The recommended adult daily dose of Pre-Sate (chlorphentermine hydrochloride) is one tablet (equivalent to 65 mg chlorphentermine base) taken after the first meal of the day. Use in children under 12 not recommended.

Overdosage

Manifestations: Restlessness, confusion, assaultiveness, hallucinations, panic states, and hyperpyrexia may be manifestations of acute intoxication with anorectic agents. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension, or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma.

Management: Management of acute intoxication with sympathomimetic amines is largely symptomatic and supportive and often includes sedation with a barbiturate. If hypertension is marked, the use of a nitrate or rapidly acting alpha-receptor blocking agent should be considered. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendations in this regard.

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From the Medical Schools



ST. LOUIS UNIVERSITY

Appointments of ten full-time and seven part-time faculty members of the staff of St. Louis University School of Medicine have been announced by Rev. Edward J. Drummond, S.J., vice-president for the University Medical Center.

Appointed to full-time positions were Drs. Jerome D. Cohen, Alexander L. Mark, Duk Jae Park and Richard B. Whiting, all as assistant professors of internal medicine; William S. Bazley, Praphat Hovadhanakul and Yasuo Ishida, all as instructors in gynecology and obstetrics; Jose Garcia-Otero, instructor in radiology; David M. Judge, instructor in pathology; and Thomas F. Reardon, instructor in internal medicine.

New part-time faculty members are Drs. Moududur Rahman, assistant clinical professor of ophthalmology; Ronald E. Hoffmann, senior instructor in orthopedic surgery; Raymond C. Jablonski, instructor in radiology; and Yilmaz C. Bilsel, Ravinder B. Mehra and Wolfgang P. Schuessler, all as instructors in internal medicine. Walter R. Stafford, newly-promoted associate clinical professor of ophthalmology, also accepted a part-time appointment as an assistant clinical professor of pathology.

A double promotion for Dr. Budh D. Bhagat, to full professorships of physiology and pharmacology, was among a number of promotions announced this fall for faculty members of the University School of Medicine.

Other full professors named were Drs. D. Elliott O'Reilly, professor of orthopedic surgery and chairman of the department, and Kenneth R. Smith, Jr., professor of surgery. Dr. Raymond O. Muether and Dr. Jack Zuckner were named clinical professors of internal medicine and Dr. Robert E. Ryan was named clinical professor of otolaryngology.

Promotions to associate professor were for Drs. Louis S. D'Agrosa, physiology; Alvin H. Gold, pharmacology; Raymond M. Keltner, surgery; James A. Monteleone and Patricia L. Monteleone, pediatrics; Frank Ostapowicz and Ralph E. Woods, gynecology and obstetrics; and John B. Shields, radiology. New associate clinical pro-

fessors are Drs. John J. Budd, Jr., and Peter W. Kinsella, internal medicine; Theodore J. Dubuque and Donald R. Judd, surgery; W. Howard Lewin and Walter R. Stafford, ophthalmology; and Harry G. Moore, Jr., neurology and psychiatry.

Dr. Irwin Horwitz was named associate clinical professor emeritus in orthopedic surgery, retroactive to March 1, 1970; Dr. Willard Bartlett, Jr., as associate clinical professor emeritus in surgery; and Dr. Erwin J. Casey as associate clinical professor in ophthalmology.

Newly promoted assistant professors are Drs. Robert Cuddihee and K. Ken Hu, internal medicine; Sham Gandhi, pharmacology; James Goebel, radiology; John V. Hahn, surgery; Marshall B. Katzman, neurology and psychiatry; and Gaston S. Magrinat, neurology and psychiatry, retroactive to September, 1970.

New assistant clinical professors are Drs. Thomas H. Boldt, Joseph P. Costello, John R. Hogan, Otakar Maehek, and Joseph V. O'Donnell, internal medicine; Frank Hunleth, gynecology and obstetrics; Charles A. Nigh, Frank A. Palazzo and Paul E. Stohr, surgery; Stephen L. Post, neurology and psychiatry; Salvatore N. Riggio, Roland A. Triska and Warren J. Wimmer, pediatrics; William N. Sauer, otolaryngology; and Donald C. Schnellmann, ophthalmology.

Named as senior instructors were Dr. Paul G. Fetick, pediatrics, and Dr. James H. Jones, ophthalmology.

Dr. Robert J. Snowe was recently named as Assistant Health Commissioner in charge of the Bureau of Maternal and Child Health Services for St. Louis and an assistant clinical professor of pediatrics at the University School of Medicine. Doctor Snowe fills a post in the city's Health Division which has been vacant for 20 years. He held posts at the Erie County Health Department in Buffalo, N. Y., and Duke University Medical Center before coming to St. Louis.

Rev. Edward J. Drummond, S.J., vice-president of the University Medical Center, was recently named an advisor to the American Hos-

pital Association, a member of the Board of Directors of the American Association for Health Centers and a member of the Advisory Board on Regents University Degrees for the University for the State of New York.

Founders Week at St. Louis University is scheduled for October 11-17 this year. Programs sponsored by the Medical Alumni Association include a Dean's Reception at Cardinal Glennon Hall from 4 PM to 6 PM on October 14. Individual class get-togethers and scientific programs on various topics are scheduled from 10 AM to noon on October 15, followed by dinner for all Medical reunion classes at the Stadium club that night.

UNIVERSITY OF MISSOURI-COLUMBIA

A computer system at the University of Missouri Medical Center is slashing critical hours and days from time needed to get X-ray diagnosis to physicians and nurses.

MARS (Missouri Automated Radiology System) eliminates the need to dictate, edit, type, proofread, distribute and file X-ray diagnoses by hand. It permits radiologists to enter diagnostic information directly into an IBM System/360 Model 50 from TV-like terminals in the radiology department.

Dr. Gwilym Lodwick, professor and chairman of the radiology department at the 440-bed institution, said, "We always had emergency conditions in which we gave a doctor our diagnosis

verbally, shortcutting the manual typing system. Now we give every doctor every diagnosis just that fast, regardless of case load."

He said that accuracy, uniformity and speed make MARS especially useful in the large medical center. "No matter how erudite a radiologist's opinion is," Doctor Lodwick said, "it is of little importance if it is available after clinical decisions already have been made."

Doctor Lodwick said that research at other U. S. institutions and abroad had thus far failed to produce a similar automated system. "This is the first on-line radiological reporting system I know of in actual use," he said.

MARS is the product of five years' research involving Federal grants in excess of \$1 million. Its first use was in April, 1970.

One of three newly-established bone tumor referral centers in the country also is located within the Department of Radiology at the Medical Center. Designed to help physicians from around the country in the diagnostic evaluation of bone tumor X-rays, the centers (also in Los Angeles and Philadelphia) were established at the recommendation of the Commission on Cancer of the American College of Radiology.

Called the Mid-American Bone Diagnostic Center and Registry, the Missouri center is under the direction of Dr. Gwilym S. Lodwick. He will be assisted by Dr. Corinne Farrell, research associate in radiology and noted for her work in osteosarcomas, a type of malignant bone tumor.

A physician wanting assistance in the diagnosis of a bone tumor can use the Center by sending the problem X-ray along with a résumé of the patient's history and findings. The radiograph will be reviewed and a report sent to the doctor by mail or by collect long distance telephone if desired or indicated. There is no charge for the service.

UNIVERSITY OF MISSOURI-KANSAS CITY

The School of Medicine at the University of Missouri-Kansas City opened its doors on August 30 to what it terms "a new era of stressing care and compassion for patients" as it welcomed the first classes totaling 93 students.

Their initial day was marked with class visits to rooms of bedridden patients at six different hospitals throughout the city and tours of five other health-care facilities in the Hospital Hill area where the new UMKC Medical School is located.

The 53 students beyond Year 1 plus the students in Year 1 were admitted to the unusual six-year program that emphasizes broad clinical



Speed, accuracy and uniformity are three of the benefits derived by the staff of the University of Missouri-Columbia Medical Center using the Missouri Automated Radiology System (MARS). Any of the center's 30 radiologists sits before an IBM 2260 visual display terminal and is "talked through" his X-ray examination by the computer. It displays a series of fill-in-the-blank formats and the radiologist indicates the location and nature of his findings, adding in free-text whatever comments he thinks appropriate.

competencies together with strong recognition of the sociological and psychological factors which accompany patients' illnesses.

The six-year program, consisting of 48 weeks in each of the first five years and 36 weeks in the final year, includes 40 Year-1 students, most of whom were graduated from high school just last June, in addition to 17 in Year 2, 23 in Year 3, and 13 in advanced standing. The average age of the freshmen is 17.8. Three are 16 years old.

According to Dean Richardson K. Noback and Dr. Andrew McCanse, chairman of the Council on Selection, the advanced standing students, who will complete their training in two to three years, number four Ph.D.'s, including two in pharmacology and one each in biochemistry and physiologic psychology. Still another is the holder of a doctor of dental surgery degree.

One of the innovative features of the new Medical School is the classification of the young people in the six-year period as "provisional medical students" in their first two years. During this phase of their training, they will devote 25% of their time to medical studies and actual patient-oriented situations on Monday, Wednesday and Friday afternoons, Saturday mornings and ten weeks in the summer.

The remaining 75% of their schedule will be involved with liberal arts courses taken at the University's College of Arts and Sciences. From Years 3 to 6 they will continue with their humanities courses for 25% of their schedule and increase their medical, clinical and community health involvement during the remaining 75% of time. At the end of six years, they will receive both the baccalaureate and medical degrees.

Dr. E. Grey Dimond, provost for the health sciences at UMKC, outlined four advantages to the new medical school's approach:

- More doctors can be trained in faster time.
- The use of more hospitals and doctors in the community can reduce construction and staff costs.
- By putting students into problems with people earlier, they learn more quickly what medicine is really all about.
- In taking liberal arts courses throughout their six years, the future doctor may develop into a better balanced person.

Dr. Dimond also said the involvement of the UMKC Medical School with the community and region made the new institution truly an open medical school and a community of scholars.

The new school now is quartered in the renovated former Research Hospital School of

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Nursing. Ground for a \$13,284,300 medical school building is expected to be broken next January with occupancy scheduled for January, 1974. Also to be constructed will be a \$25 million teaching hospital to replace the present General Hospital. The entire Hospital Hill complex facilities when completed will total about \$100 million.

According to the recently released data on the 54 students beyond Year 1, the ages of advanced standing students range from 22 to 34. Their geographic distribution shows nine from Missouri, two from Kansas, and one each from Washington, D. C. and California. Two are women. Ages of the Year 3 students, all from Missouri, range from 20 to 27. The Year 2 students range in age from 17 to 19. Two are women and one is Mexican American.

UMKC's Medical School will be one of five new Medical Schools opening this fall. The others are the State University of New York at Stony Brook Health Sciences Center; University of South Florida College of Medicine, Tampa, Fla.; Rush Medical College, Chicago, Ill.; and University of Nevada School of Medical Science, Reno, Nev. The combined enrollment for all five schools will be 374.

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CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

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Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of child-bearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.



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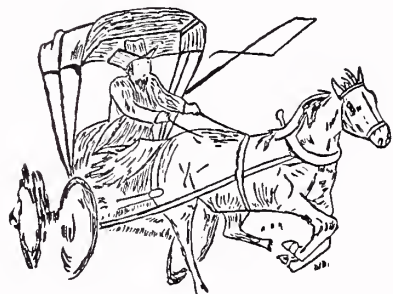
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Missouri Medicine in Review



FORTY YEARS AGO

A roentgen ray tube developing 2,000,000 volts has been installed recently in the new Kellogg radiation laboratory of the California Institute of Technology at Pasadena. The voltage of the new tube is double that of any tube used previously. The tube is 30 feet high by nine feet and is encased in a concrete chamber. Research on the possibility of developing a new and more effective method of treating cancer and other diseases will be conducted with this high power roentgen ray tube. Dr. C. C. Lauritsen, Pasadena, designed the tube and will operate it.

Fleas, long suspected of transmitting endemic typhus fever in the United States, have at last been convicted of the offense. For months, Drs. R. E. Dyer, A. S. Rumerich and L. F. Badger of the U. S. Public Health Service have been working to determine if fleas were responsible for spreading typhus fever or if some other agent should be sought. In Europe and Asia, typhus is spread by the body louse, but cases have occurred in the United States in which no such source of infection was possible.

TWENTY-FIVE YEARS AGO

The Phelps-Crawford-Dent and Pulaski Counties Medical Societies met at the Waynesville General Hospital for a dinner meeting on July 23. The meeting was called under the auspices of the temporary organization of the societies with Dr. George E. Joseph, Salem, President and Dr. R. E. Breuer, Newburg, Secretary. Twenty-six physicians were in attendance. The follow-

ing officers were elected to serve until Jan. 1, 1947: President, Dr. George E. Joseph; Vice-President, Dr. Cyrus Mallette, Crocker; Secretary-Treasurer, Dr. R. E. Breuer; Censors, Drs. A. H. Horne of Steelville, A. A. Drake of Rolla and William R. Lytle of Waynesville.

The South Central Counties Medical Society met at the Elliott Hotel in Mountain Grove on August 16 for a dinner meeting. The following members and guests were present: Drs. J. R. Mott, Hartville; J. A. Fuson, Mansfield; R. M. Norman, Ava; A. C. Ames, Mountain Grove; C. T. Callihan, Willow Springs; E. C. Bohrer and Rollin H. Smith, West Plains; and D. L. Yancy and Robert Duncan, Springfield.

TEN YEARS AGO

At a recent meeting of the staff of St. Louis County Hospital, Dr. E. Lee Dorsett, Clayton was elected chief-of-staff. Dr. R. C. Kingsland, Clayton, was elected associate chief-of-staff and Curtis H. Lohr, St. Louis, was elected secretary.

Re: HR 4222, 87th Congress, Durward G. Hall, M.D., Springfield, testified on the King-Anderson Bill during the recent hearings. Prior to this, his first term in Congress, Dr. Hall practiced as a surgeon in Springfield. He is a Fellow of the American College of Surgeons, a Diplomate of the American Board of Surgery and has been active in affairs of the Missouri State Medical Association. He has been a Delegate to the American Medical Association for several years. His seven years of active duty in the U. S. Army also included service as Chief of Personnel, Army Surgeon General, during World War II.

The American College of Chest Physicians conferred fellowship certificates on 204 physicians at their summer meeting. Among them are Drs. Hector W. Benoit, Jr., Edward G. Kettner and Warren F. Wilhelm of Kansas City and Edward H. Fischer of North Kansas City.

The new \$4,288,000 David P. Wohl, Jr. Washington University Clinics have been dedicated and are in use. U. S. Senator Lister Hill of Alabama spoke at the dedication ceremonies. The top four floors of the 12-story building have been equipped for research for the Departments of Medicine and Surgery.

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Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other

antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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NOVEMBER, 1971

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114th MSMA Annual Session

April 6-9, 1972, Kansas City

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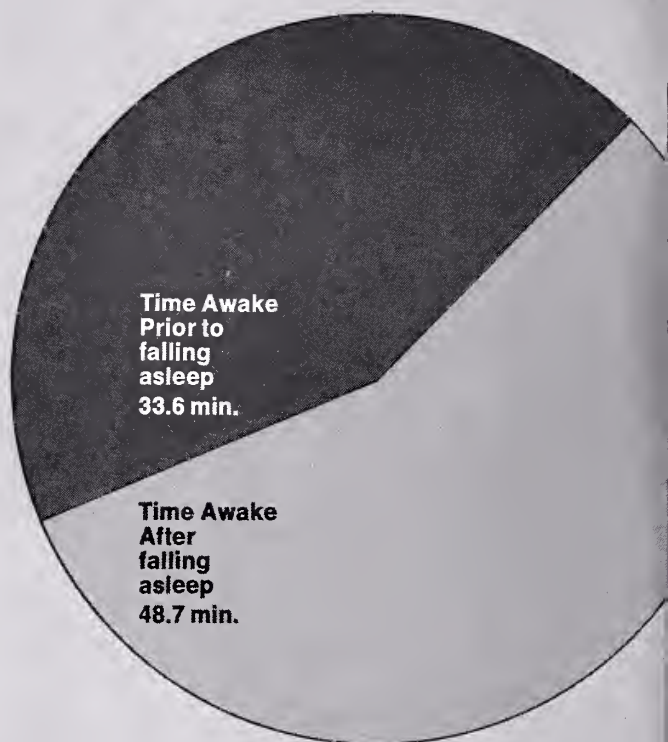
Results shown represent average values in all subjects for the three consecutive nights of placebo administration prior to Dalmane therapy and the seven consecutive nights on Dalmane 30 mg.

Dalmane is also relatively safe, as reported in clinical studies. Instances of morning "hang-over" have been relatively infrequent; paradoxical reactions (excitement) and hypotension have been rare. Dizziness, drowsiness, lightheadedness and the like were the side effects noted most frequently, particularly in the elderly or debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

References: 1. Frost, J. D., Jr.: "A System for Automatically Analyzing Sleep," Scientific Exhibit presented at Clinical Convention, A.M.A., Boston, Nov. 29-Dec. 2, 1970, and Aerospace M.A., Houston, April 26-29, 1971.

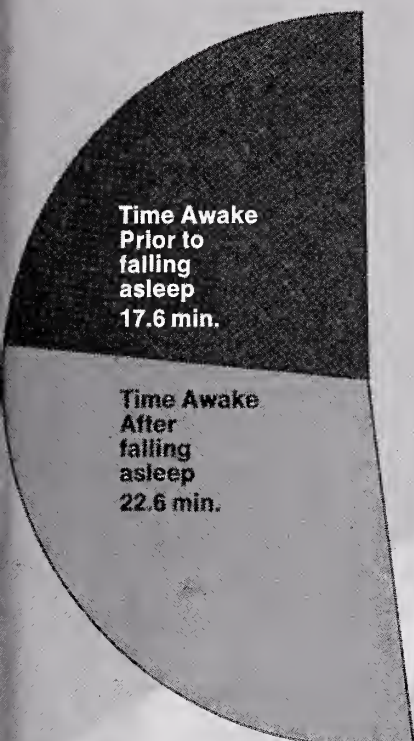
2. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley, N.J.

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(flurazepam HCl)



and slept through the night

On
Dalmane
(flurazepam HCl)



Age sleep laboratory measurements in cited studies

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Percent sleep	88.6	94.5

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Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

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Seek Injunction In St. Louis County Court Petition

Ten medical doctors from the St. Louis area have filed a petition asking for an injunction against the Missouri State Medical Association, its officers and councilors seeking to end the defendants' participation in the Health Care Foundation of Missouri. The Health Care Foundation is also a defendant in the suit filed in the St. Louis County Circuit Court. All plaintiffs are members of the Missouri State Medical Association.

The petition seeks to enjoin the defendants in their capacity as officers and members of the Council of MSMA from any further activity in the operation or management of the Health Care Foundation and asks that the defendants also be enjoined from giving to the Health Care Foundation any financial support from the treasury of MSMA and from giving to the Foundation any membership list or other reports or property belonging to the Association. The plaintiffs also ask restitution to the MSMA treasury for funds appropriated to the Health Care Foundation and that officers and Councilors be enjoined from any further activity in the Health Care Foundation.

In Count 2 of the petition, the plaintiffs allege that the defendant Health Care Foundation of Missouri has in its possession certain funds, membership lists, reports and other property belonging to the Missouri State Medical Association and that these items have been used in the past and will be used in the future by the Health Care Foundation of Missouri unless prohibited by the Court.

The Court is asked to issue an order restraining the Health Care Foundation from using any additional funds appropriated by the defendants and from using membership lists, reports and other property delivered to it by the Missouri State Medical Association and that these items be returned to the Association.

Plan Public Affairs Conference In January; All Members Invited

The Missouri State Medical Association will hold a Public Affairs Conference on Saturday afternoon and evening, January 29 and on Sunday morning, January 30, 1972, at the Ramada Inn, Columbia, Mo. The new Public Affairs Conference is the successor to the County Society Officer's Conference which has been held for the past four years.

All officers of county medical societies, as in the past, are urged to attend but a special emphasis is being put on inviting all members of the Association to attend the Public Affairs Conference.

The 1972 Public Affairs Conference is being planned on an issues-oriented basis - one aimed at telling members of the Missouri State Medical Association what is going on today. The old format as used at Officer's Conferences was aimed more at orienting county society officers about organized medicine.

Among the topics on the program for the 1972 Public Affairs Conference are: Health Care Delivery Philosophy; Neighborhood

The petition alleges that neither the plaintiffs nor any of the members of the class they represent approved or consented to the formation of the Health Care Foundation and that neither the Constitution or By-Laws of the Missouri State Medical Association authorize or allow its officers or councilors to form such a corporation and that the defendants exceeded the authority vested in them by virtue of their office.

The petition further alleges that By-Laws of the Health Care Foundation seek to bring plaintiffs and other members of the Association into membership of the Foundation without their approval or consent and against their will.

relationship to Overall Health Care Delivery; SAMA - Its Aims and Objectives and Relationship to Organized Medicine; The Foreign Physician and His Integration into the U.S. Health Care System; the Health Care Foundation of Missouri; A Look at Physician Assistant Programs; Emergency Medical Care Needs and Proposals in Missouri; A Look at the Legislative Situation in Missouri and in Washington; the National Health Insurance Outlook and a panel on relationships with the press.

A banquet is planned for Saturday night, January 29, with Hoyt Gardner, M.D., Chairman of the American Medical Association Political Action Committee, as the guest speaker.

Question and answer sessions featuring program participants are scheduled for both Saturday afternoon and Sunday morning.

The program is being planned by an Ad Hoc Committee of the Commission on Public Affairs chaired by Hubert Ritter, M.D., St. Louis. Richard Bowles, M.D., Liberty, is Chairman of the Public Affairs Commission.

Additional details on the Public Affairs Conference will be printed in the December and January editions of **MISSOURI MEDICINE**.

MSMA
News

HMO's Advantages Stressed by Proponents

(Editor's Note: The House of Delegates of the Missouri State Medical Association, meeting in April of this year, directed that the Association engage in an active educational program to disseminate all available information concerning Health Maintenance Organizations and other health care delivery systems to the medical profession and the public. The following article is the second in a series of three on the history and background of pending legislation as well as pros and cons of the Health Maintenance Organization approach. The material was prepared by the California Medical Association and published in a special issue of the **CMA News**. The final article of the three in the series which will appear in the December issue of **MISSOURI MEDICINE** lists arguments against the HMO approach.)

PROPONENTS' VIEWS

1. Health Maintenance Organizations, by virtue of their contractual assumption of responsibility for a defined range of services at a negotiated per capita rate, could have wide latitude (subject to legislation and regulations) to make their own professional decisions, establish priorities for patient care and exercise self-discipline in assuring the adequacy and quality of services provided.

2. HMOs, as entities under contract to provide care for a defined population, could plan and justify their present and foreseeable needs for facilities, equipment, professional and ancillary manpower, and other capital and operating costs.

3. Contractually stipulated performance reporting by a HMO and competition could minimize the need for outside interference in the internal affairs of the HMO. The HMO concept could promote the emergence of self-regulating organizations which could slow the trend toward increasing federal intervention and domination.

4. HMOs could assure the delivery of medical services more efficiently and effectively than fee-for-service providers, at a predetermined cost to government and to the consumer.

5. HMOs could have economic incentives to utilize modern business techniques and new types of health manpower, to provide coordinated care, to avoid duplicating services, and to utilize the least expensive care appropriate and adequate to a patient's needs.

6. Groups of physicians receiving capitation payments could, based upon peer decisions, remunerate their physician members on any basis, including fee-for-service.

7. HMOs could provide economic incentives to professionals to keep people well by emphasizing preventive services and ambulatory care. They could also increase the physicians' awareness of the cost implications of care wherever provided. By taking responsibility for a defined population at a pre-determined capitation rate, a disincentive could be created for unnecessary services, taking the place of external regulation and utilization surveillance.

8. Well-managed (administratively and professionally) HMOs could prosper. Enrollees of HMOs that do not survive can either choose another HMO or return to fee-for-service providers.

9. HMOs could help to assure continuity, accessibility and availability of patient care; these are sometimes inadequate to patients in certain geographic areas.

10. The HMO could seek innovation through the resourcefulness and initiative of local medical and consumer communities.

11. Recipients of public programs could be cared for as regular (mainstream) patients, both administratively and pro-

fessionally. Prior authorization from external agencies for hospitalization might not be required.

12. The removal of financial barriers through Medicare, Medi-Cal (Medicaid), or universal health insurance may not solve all of the problems of manpower shortage, maldistribution and patient access; the incentives offered by HMOs could provide some helpful alternative solutions without imposing on them a monolithic, national health system.

13. The variety of possible patterns of innovation for HMO is reflected in the interest on the part of such diverse organizations as private health insurance carriers, the "Blue" plans, hospitals, consumer groups, medical schools, medical societies, industry, business corporations and group practice plans. HMO could represent another component of a private-public partnership committed to a pluralistic and competitive health care industry.

14. The advocacy of HMO by the Administration reflects its desire to place the entire responsibility for peer review, cost of, and accessibility to, medical care in the hands of the medical profession which has the capability and capacity of utilizing this kind of mechanism in fulfilling its professional and economic responsibilities in the provision of adequate medical care to the public. HMOs could consist of different forms of practice arrangement as an acceptable alternative to the Kennedy and other proposals which present fewer opportunities for professional acceptance.

15. The emergency of the HMO could establish a mechanism geared to utilize competition and modern technology for the health care industry on behalf of the professional and public interest.

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PRICE CUT
50%**

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GREATER PATIENT
ECONOMY...**

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POTASSIUM-HETACILLIN
**THE AMPICILLIN
DERIVATIVE**

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

An epidemic that's striking home...

gonorrhea

There were more than 13,000 reported cases
of gonorrhea in the Show Me State last year...
almost one-third of them in Kansas City alone

In Missouri...and everywhere else...
a new alternative

NEW Trobicin[®]

SPECTINOMYCIN DIHYDROCHLORIDE,
PENTAHYDRATE, UPJOHN

**single-dose treatment for
intramuscular use only**

a chemically distinct antibiotic indicated specifically
for treatment of acute gonorrhea:

in the male-acute urethritis and proctitis

in the female-acute cervicitis and proctitis

when due to susceptible strains of *N. gonorrhoeae*

High cure rate: * 96% of 571 males, 95% of 294 females
(Dosages, sites of infection, and criteria for diagnosis
and cure are defined on page 3 of advertisement).

**Assurance of a single-dose, physician-controlled
treatment schedule**

**No allergic reactions occurred in patients with
an alleged history of penicillin sensitivity
when treated with Trobicin, although penicillin
antibody studies were not performed**

**Active against most strains of
Neisseria gonorrhoeae *in vitro* (M.I.C. 7.5-20 mcg/ml)**

**A single two-gram injection produces peak serum
concentrations averaging about 100 mcg/ml in
one hour** (average serum concentrations of 15 mcg/ml
present 8 hours after dosing).

*Data compiled from reports of 14 investigators.

NOTE: Antibiotics used in high doses for short periods of time
to treat gonorrhea may mask or delay the symptoms of incubating
syphilis. Since the treatment of syphilis demands prolonged
therapy with any effective antibiotic, and since Trobicin is not indicated
in the treatment of syphilis, patients being treated for gonorrhea
should be closely observed clinically. Monthly serological follow-up
for at least 3 months should be instituted if the diagnosis of
syphilis is suspected. Trobicin is contraindicated in patients previously
found hypersensitive to it.

For full prescribing information, including contraindications, warnings
and precautions, please see last page of this advertisement.

Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001

Trobicin and the gonorrhea challenge

An accelerating epidemic— a decelerating susceptibility to penicillin

Gonorrhea is now the most prevalent reported communicable disease in the nation. The estimated number of new cases of gonorrhea in the United States exceeded two million for the first time in 1970. To compound the problems, strains of *N. gonorrhoeae* increasingly resistant to penicillin and other antibiotics are appearing throughout the country. Schedules of treatment which were effective only a few years ago now result in a significant percentage of treatment failure. *In vitro* studies have demonstrated that resistance of *N. gonorrhoeae* may also develop to Trobicin.

Thus, while aqueous Procaine Penicillin G remains the drug of choice for the majority of patients, the need for a non-penicillin, intramuscular antibiotic for acute gonorrhea in the male and female is abundantly clear. Such an antibiotic should be effective following a single intramuscular injection—and it should not demonstrate cross-resistance with penicillin.

Trobicin—a new alternative specifically for the treatment of acute gonorrhea

Trobicin is indicated in the treatment of acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

High cure rates: 96% of 571 males, 95% of 294 females

Clinical Results with Single-Dose Treatment, Intramuscularly* (Data compiled from reports of 14 investigators**)

	Dosage	Number of Patients	Number Cured	Percent Cured
Adult Males: Gonorrheal urethritis	2 grams	475	457	96%
	4 grams	96	93	97%
Adult Females: Gonorrheal cervicitis	4 grams	294	280	95%

Diagnosis was confirmed by cultural identification of *N. gonorrhoeae* on Thayer-Martin medium in all patients. Criteria for cure: negative culture after at least 2 days post-treatment in males and at least 7 days post-treatment in females. Any positive culture obtained post-treatment was considered evidence of treatment failure even though the follow-up period might have been less than the periods cited above under "criteria for cure" except when the investigator determined that reinfection through additional sexual contacts was likely. Such cases were judged to be reinfections rather than relapses or failures. These cases were regarded as non-evaluable and were not included in the table above.

No allergic reactions occurred in patients with alleged history of penicillin hypersensitivity who were treated with Trobicin, although penicillin antibiotic studies were not performed.

Chemically distinct

Trobicin is structurally not related to any other antibiotic commonly used to treat gonorrhea.

The assurance of a single-dose, physician-controlled treatment schedule

Intramuscular injections should be made deep into the upper outer quadrant of the gluteal muscle.

Adult male: Single 2 gram dose I.M. in acute gonorrheal urethritis. Single 4 gram dose I.M. (should be divided between two gluteal injection sites) in gonorrheal proctitis and in patients being re-treated after failure of previous antibiotic therapy. In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams intramuscularly is preferred.

Adult female: Single 4 gram dose I.M. (should be divided between two gluteal injection sites) in acute gonorrheal cervicitis and proctitis.

Safety for use in pregnancy has not been established, nor safety for use in infants and children.

The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.

During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single and multiple-dose studies in normal volunteers, a reduction in renal output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

*4-gram doses were injected in two gluteal sites.

**Medical Research Files, The Upjohn Company

a chemically distinct antibiotic indicated specifically for treatment of acute gonorrheal urethritis and proctitis in males and cervicitis and proctitis in females when due to susceptible strains of *N. gonorrhoeae*

new **Trobicin®**

STERILE SPECTINOMYCIN DIHYDROCHLORIDE
PENTAHYDRATE, UPJOHN

single-dose treatment for intramuscular use only

File Trobicin®

ctinomycin dihydrochloride penta-
rate)—For Intramuscular injection:
n vials containing 5 ml when reconsti-
d with diluent. 4 gm vials containing
l when reconstituted with diluent.

aminocyclitol antibiotic active *in vitro*
inst most strains of *Neisseria gonor-*
ae (MIC 7.5 to 20 mcg/ml). Defini-
in vitro studies have shown no cross
stance of *N. gonorrhoeae* between
iclin and penicillin.

ications: Acute gonorrheal urethri-
and proctitis in the male and acute
gonorrheal cervicitis and proctitis in the
ale when due to susceptible strains
N. gonorrhoeae.

traindications: Contraindicated in
ents previously found hypersensitive
robicin. Not indicated for the treat-
t of syphilis.

arnings: Antibiotics used to treat gon-
ea may mask or delay the symp-
s of incubating syphilis. Patients
uld be carefully examined and
thly serological follow-up for at least
onths should be instituted if the diag-
s of syphilis is suspected.

ty for use in infants, children and
gnant women has not been estab-
d.

Precautions: The usual precautions should be observed with atopic individ-
uals. Clinical effectiveness should be
monitored to detect evidence of devel-
opment of resistance of *N. gonorrhoeae*.

Adverse reactions: The following re-
actions were observed during the single-
dose clinical trials: soreness at the injec-
tion site, urticaria, dizziness, nausea,
chills, fever and insomnia.

During multiple-dose subchronic toler-
ance studies in normal human volun-
teers, the following were noted: a de-
crease in hemoglobin, hematocrit and
creatinine clearance; elevation of alka-
line phosphatase, BUN and SGPT. In
single and multiple-dose studies in nor-
mal volunteers, a reduction in urine out-
put was noted. Extensive renal function
studies demonstrated no consistent
changes indicative of renal toxicity.

Dosage and administration: Keep
at 25°C and use within 24 hours after
reconstitution with diluent.

Male—single 2 gram dose (5 ml) intra-
muscularly. Patients with gonorrheal
proctitis and patients being re-treated
after failure of previous antibiotic ther-
apy should receive 4 grams (10 ml). In
geographic areas where antibiotic re-

sistance is known to be prevalent, initial
treatment with 4 grams (10 ml) intramus-
cularly is preferred.

Female—single 4 gram dose (10 ml) in-
tramuscularly.

How supplied: Vials, 2 and 4 grams
— with ampoule of Bacteriostatic Water
for Injection with Benzyl Alcohol 0.9%
w/v. Reconstitution yields 5 and 10 ml
respectively with a concentration of spec-
tinomycin dihydrochloride pentahydrate
equivalent to 400 mg spectinomycin per
ml. For intramuscular use only.

Susceptibility Powder—for testing in
vitro susceptibility of *N. gonorrhoeae*.

Human pharmacology: Rapidly ab-
sorbed after intramuscular injection. A
two-gram injection produces peak serum
concentrations averaging about 100
mcg/ml at one hour with 15 mcg/ml at
8 hours. A four-gram injection produces
peak serum concentrations averaging
160 mcg/ml at two hours with 31 mcg/
ml at 8 hours.

For additional product information, see
your Upjohn representative or consult
the package insert.

MED-B-1-S (LWB)

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The Upjohn Company, Kalamazoo, Michigan 49001

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*Mintezol[®]
is nonstaining*

MINTEZOL[®] (THIABENDAZOLE [MSD])

SUSPENSION, 500 mg per 5 cc

You'll rely on MINTEZOL (Thiabendazole, MSD) often for pinworm disease. Not just because that's a very common helminthic infestation, but because MINTEZOL has such a high degree of efficacy. MINTEZOL also provides an unusually wide range of action—against threadworm, hookworm, whipworm, and large roundworm disease. This broad spectrum of activity makes it particularly effective in these mixed worm infestations. MINTEZOL isn't a dye. So you won't hear complaints about stained teeth, clothing, or bed linen. The most frequently occurring side effects have been anorexia, nausea, vomiting, and dizziness.



Contraindications: History of hypersensitivity to thiabendazole.

Warnings: May impair alertness; operation of automobiles and other activities made hazardous by diminished alertness should be avoided. If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed; erythema multiforme, including Stevens-Johnson syndrome (with a fatal case), has been associated with thiabendazole therapy in children. Safe use in pregnancy or lactation has not been established.

Precautions: Since thiabendazole is metabolized in the liver and excreted by the kidneys, hepatic and renal function should be carefully monitored in patients with dysfunction of these organs.

Adverse Reactions: Frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress,

pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, collapse, abnormal sensation in eyes, blurring of vision, hyperirritability, numbness, hyperglycemia, xanthopsia, enuresis, perianal rash, cholestasis and parenchymal liver damage, hypotension, and a transitory rise in cephalin flocculation and SGOT. Hypersensitivity reactions include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy. Appearance of live *Ascaris* in the mouth and nose has been reported on rare occasions.

Some patients may excrete a metabolite which imparts an odor to urine, much like that which occurs after ingestion of asparagus. Crystalluria without hematuria has been reported on occasion, but has promptly subsided with dis-

continuation of therapy; while the etiologic role of thiabendazole has not been established, the possibility of crystalluria should be kept in mind. Transient leukopenia has been reported in a few patients, but the cause and effect relationship in these cases has not been established.

NOTE: In children weighing less than 30 pounds, clinical experience with thiabendazole for treatment of intestinal parasitosis has been limited. Thus, the benefits of this therapy should be weighed against the possibility of adverse reactions.

Supplied: Suspension, containing 500 mg per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME

Formation of the Washington University Medical School and Associated Hospitals, Inc. (WUMSAH)

A Study in the Partnership of Medical Education and Patient Care

FROM ITS BEGINNING in 1911, the Washington University Medical Center in St. Louis, Mo., has grown to become one of the largest medical complexes in the United States, containing 1,706 beds and 2.5 million square feet of educational, scientific and patient care space.¹ In terms of education, the medical center contains the Washington University School of Medicine and its allied departments of social service, child guidance, physical therapy, occupational therapy and hospital administration; the Washington University School of Dentistry; and various hospital schools, such as the Barnes Hospital Schools of Nursing, Anesthesiology, X-ray Technology and Medical Technology.²

In terms of research and patient care, the medical center includes four independently-owned hospitals—Barnes Hospital, Barnard Free Skin and Cancer Hospital, Jewish Hospital of St. Louis and St. Louis Children's Hospital, plus four university-owned hospitals, which are McMillan Hospital (ophthalmology and otolaryngology), Renard Hospital (psychiatry), the David P. Wohl, Jr., Memorial Hospital (medicine and surgery) and St. Louis Maternity Hospital. Moreover, the medical center contains the university-owned Oscar Johnson Institute for Medical Research in ophthalmology, otolaryngology and neurology; the David P. Wohl, Jr. Memorial-Washington University Clinics building; the Edward Mallinckrodt Institute of Radiology; and the Irene Walter Johnson Institute of Rehabilitation, along with the independently-owned Central Institute for the Deaf.³ The development of the Washington University Medical Center illustrates the partnership of medical education and patient care and the vital need for open channels of communication and methods for resolving conflicts between the two, if both are to grow and prosper together.

The Washington University School of Medicine was formed in 1899 by the union of the first two medical schools established west of the Mississippi River. They are the Missouri Medical College and the St. Louis Medical College, popularly known as McDowell's College and Pope's College because of the close identification of the two schools with their respective deans, Joseph Nash McDowell of the Missouri Medical College and Charles Alexander Pope of the St. Louis Medical College.⁴

In 1909, Abraham Flexner began a survey of 155 medical schools in the United States and Canada for the Carnegie Foundation for the Advancement of Teaching. In his report to Dr. Henry S. Pritchett, President of the Carnegie Foundation, Mr. Flexner stated his belief that the medical department (later the school of medicine) of Washington University must either be abolished or reorganized. Doctor Pritchett mailed the report to Robert S. Brookings, a St. Louis merchant who was President of the Board of Directors of Washington University. Mr. Brookings was shocked and immediately went to New York to see Flexner, demanding proof that the conditions were as bad as described. Abraham Flexner returned to St. Louis with Mr. Brookings and the two men went through the school. In less than two hours, Mr. Brookings was convinced that drastic action was necessary if the school was to be of the highest caliber. The following year the medical department was completely reorganized and plans laid to build a great medical center.⁵

When Robert A. Barnes, a St. Louis merchant, died in 1892, he left a will which directed that the trustees of his estate should use \$800,000 for the erection of and equipment for a hospital for sick and injured persons, without distinction of creed, under the auspices of the

Methodist Episcopal Church-South. Investigation by the trustees into the cost of building a modern hospital convinced them that the sum was not large enough to build an efficient, fire-proof building, and, therefore, they invested the trust. By 1912, the value had increased to \$2 million, a sum which permitted the building of a hospital and left an endowment greater than the original fund. The trustees were studying hospital construction at the same time Mr. Brookings was studying medical schools. It was apparent to all concerned that the two projects, the building of a medical school and the construction of a modern hospital, were so interrelated that the purpose of each would be more successfully fulfilled by an affiliation.⁶

According to the original contract of Oct. 28, 1911, which was signed by the Barnes Hospital Trustees and Washington University, the trustees stated that they had become satisfied, after a thorough examination, that the efficiency of a hospital depends in large part upon the ability of its medical staff and that a hospital could render better service to its patients when it has associated with it an organized medical school and scientific staff, laboratories and dispensary. For its part, Washington University expressed its conviction "that a medical department of a university is greatly benefitted by having a hospital connected with it in which it can teach its students, from actual observation of the sick by the student observing the treatment of the sick and injured at the bedside and in the operation room."⁷

The main points of the contract specified that the Barnes Trustees promised to build a "first class hospital at a cost of not less than six hundred thousand dollars" and agreed that the medical staff of the hospital consist solely of the teaching staff of the medical school. In return, Washington University agreed to build a modern dispensary for not less than \$100,000 and a modern medical school for not less than \$200,000. This contract was to continue in effect for 50 years (Oct. 28, 1961) unless either party decided to abrogate it at the end of 30 years (Oct. 28, 1941) by giving notice in writing to the other party at least three years prior to the date of termination.⁸

A similar contract between Washington University and the St. Louis Children's Hospital was signed on July 8, 1912. This put into written form the premise upon which affiliation was based: recognition that a teaching hospital was better able to render efficient, skilled service to

This is the story of the formation of the Washington University Medical School and Associated Hospitals, Inc. (WUMSAH), the organization created in 1962 to provide long range planning, fund raising and coordinated administration of the Washington University Medical Center. The Center's development illustrates the need for open channels of communication and methods of resolving conflicts, if the partnership of medical education and patient care is to prosper. Formerly Archivist at the Washington University School of Medicine Library, Mr. Walker is now Director of the Medical Information Service Center and Assistant Professor in the Medical Center Library at the University of Virginia.

patients. The university agreed to build a dispensary and to equip and maintain all necessary laboratories in which the work of the hospital would be done without charge to the hospital. The university also agreed to build or provide a home for nurses, to attempt to secure enough student nurses to fill the needs of the hospital and to treat ward patients without charge in return for the fullest rights to use ward patients for medical research and clinical instruction.⁹

During the next two decades, the Washington University Medical Center expanded rapidly. Between 1913 and 1923, the university and its affiliated hospitals agreed to construct a power plant, two of three units of the original nursing home and the St. Louis Maternity Hospital. In 1926, the St. Louis Maternity Hospital was occupied and the Washington University School of Nursing was completed (the nursing school has recently been disbanded). In 1928, the Washington University School of Dentistry opened, followed by the Edward Mallinckrodt Institute of Radiology in 1931. That year also saw the erection of the McMillan Hospital and Oscar Johnson Institute for Medical Research.¹⁰

During the period of expansion and apparent prosperity of the 20's, there was little evidence of discontent with the lack of centralized control structured into the relationships between the member hospitals and the School of Medicine. However, the consolidation and adjustment caused first by the Great Depression and loss of income from hospital patients and, later, by decreased earning power of invested funds, provoked close scrutiny of existing fiscal

arrangements between the partners of this enterprise in medical education and patient care and led to bad feelings on both sides. On Sept. 30, 1938, the Barnes Hospital Trustees notified Washington University of their intention to abrogate the 1911 contract.¹¹

The notice of abrogation of contract by the Barnes Trustees as of Oct. 28, 1941 and the further notice of abrogation by the trustees of the St. Louis Children's Hospital of that part of the contract which applied to the nursing home and the power plant served the rather useful purpose of clearing the air. The destruction of the affiliation had been feared by everyone concerned as leading to a possible destruction of the entire medical center. Now that the notices of abrogation had been received, both parties to the contract were free to examine the entire situation in the light of their primary needs and to determine the requirements for a renewal of contract. In the meantime, both the Barnes Hospital and the School of Medicine continued to observe the contract which was no longer in effect, thus reenforcing their mutual dependence and establishing the general principles upon which a new contract might be based, i.e., a statement of common purpose rather than specific guarantees that might again be outmoded by the changes bound to take place in medicine.¹²

At this point, Washington University recommended that outside investigators be invited to examine the situation and to make recommendations. The study of the organization of the medical center in 1940 by Dr. Basil MacLean of the Strong Memorial Hospital and Lawrence J. Bradley of the University of Rochester attributed many of the difficulties which arose in the relationships of the affiliated institutions to the lack of facilities for easy discussion and frank exchange of opinion on problems of common interest. As a result, they reported that too often an individual institution pursued a self-centered policy with little regard to its effect upon other member institutions of the medical center. The consultants recommended the establishment of a Medical Center Coordinating Board composed of directors or trustees of each of the member institutions to handle judicial and legislative matters and the creation of a Medical Center Coordinating Committee composed of the administrative officers of the member institutions to deal with administrative and executive affairs.¹³

These proposals were not new. In 1936-1937, the Executive Faculty (governing body) of the School of Medicine called the attention of the Washington University Board of Directors to the need of a joint study of common problems and the desirability of an organization which would provide such discussion, a proposal advocated by Dr. William McKim Marriott, then Dean of the School of Medicine. Unfortunately, neither the MacLean recommendations nor Dean Marriott's suggestion was adopted, but the specific problems which sparked the difficulties were resolved and a new contract was signed on Nov. 17, 1949 between Washington University and Barnes Hospital "to give permanence and contractual force to an affiliation which has grown in usefulness and public service far beyond the original vision, but wholly within its principles."¹⁴

By 1961, the Washington University Medical Center had become a huge complex with little coordination of its myriad of activities. Barnes Hospital, St. Louis Children's Hospital and the Barnard Free Skin and Cancer Hospital each had a contract with Washington University, by terms of which the faculty of the School of Medicine constituted the medical staff of the various hospitals. Also by contract, the Barnes Trustees operated the Washington University Hospitals—St. Louis Maternity Hospital, McMillan Hospital, David P. Wohl, Jr. Memorial Hospital and Renard Hospital—as well as the Irene Walter Johnson Institute of Rehabilitation and the David P. Wohl, Jr. Memorial—Washington University Clinics. In addition, the Barnes Trustees were by contract the operating agents for the Barnard Free Skin and Cancer Hospital. The St. Louis Children's Hospital had the agreement with the School of Medicine previously described regarding medical staff appointments, but operated its own hospital with its own administrative staff. The increasing size and complexity of the problems confronting the various institutions constituting the medical center created serious problems of administrative coordination, land use and allocation, long term planning of appropriate hospital care, teaching and research programs, and the existing loose confederation simply did not lend itself to any intelligent joint cooperative planning, fund raising or operation of the medical center as an integrated unit.¹⁵

Concerned with the consequences of this headless operation upon the future development of the Washington University School of

Medicine as a leading medical institution in the United States and, indeed, the world, the then Dean, Edward W. Dempsey, proposed the creation of a Washington University Medical Center organization in his memorandum dated April 21, 1961 addressed to the Liaison Committee of the Boards of Directors of the various affiliated hospitals. Doctor Dempsey reviewed the operations of the Harvard Medical Center, the New York Hospital-Cornell University Medical Center and other large medical centers in the United States. He concluded that "other large medical centers have been compelled to create Center Boards for planning and fund raising purposes . . . in many instances, these Boards have created centralized executive offices which provide for coordinated operations. The coordinated administration provided through a director's office appears to function smoothly and effectively."¹⁶

Doctor Dempsey then expressed his opinions on the nature of the proposed Washington University Medical Center organization and the problems involved, as follows:

" . . . This organization should advise the separate Boards responsible for the component institutions of the Center, it should undertake a coordinated program of planning and fund raising, and it should assume certain executive functions in the operation of the Center as a whole.

"Each Board should preserve its own corporate integrity and responsibility. The management of its own funds and of its own physical assets should remain its prime function. It should, however, obtain continuously from the Center organization advice as to the needs and operations of the Center as a whole and the facilities available to the Center through the activities of the other component institutions. To accomplish this flow of advice and information, a Center Board, made up of the President and one other officer from each of the Boards of the component institutions would appear advisable. The Center Board should be incorporated in its own right and eligible to administer funds given it in trust for the activities of the Center as a whole or of its component parts. Thus, the Center Board could conduct a fund-raising campaign, could allocate the funds thus obtained among the various component institutions or could undertake some new activity benefitting the Center as a whole. In order to secure the closest and most direct contact with the operative activities of the Center, the President or presiding officer of the Center Board should also be the Executive Director of the Center. . . .

"There remains the final problem of the identity of the Director. Since this proposal envisions a mechanism for introducing coordination through-

out the medical center, it follows that the Director should be a person most concerned and familiar with the coordination functions. This person is almost surely to be found within the University group, since its research and teaching activities constitute the thread which knit the entire center together. It is also true that, at present, the University would contribute the major financial share of the total Center assets and operations. I believe it would be wise, therefore, to specify in the agreement setting up the Center that its Director be *ex officio*, a designated officer of the University."¹⁷

This proposal was referred to the Liaison Committee of the Boards of Directors of the various affiliated institutions, and from this group resulted a negotiating committee composed of the representatives of these institutions. Later, this negotiating committee was expanded to include a representative from the Jewish Hospital of St. Louis. This was the first time that Jewish Hospital had been invited to participate as a member of the medical center and, thereafter, Jewish entered into the negotiations resulting in the creation of the medical center organization.¹⁸

As indicated by the second and third paragraphs quoted from Dean Edward Dempsey's memorandum, the negotiating committee faced two major problems:

(1) Agreeing upon an organizational structure which would not encroach upon the institutional integrity of each of the member institutions.

(2) Agreeing upon the type of director needed to run the medical center organization.¹⁹

For the next ten months, a period of intensive negotiations followed during which these problems were worked out. According to Dean Dempsey's original proposal, the center was to be named the "Washington University Medical Center, Inc." The Barnes Trustees believed that it would be advisable to include Barnes Hospital in the name for reasons of its good will and stature. Objections were made to the inclusion of the name of any one hospital to the exclusion of others, and the name "Washington University and Allied Hospitals Medical Center" was suggested. As finally adopted, the name became "Washington University Medical School and Associated Hospitals, Inc."²⁰

Also, according to Dean Dempsey's proposal, each of the affiliated institutions was to have two representatives on the Medical Center Board of Directors. However, the Barnes Trustees preferred proportional representation on the

Board, namely: three members from the Barnes Trustees, three members from the School of Medicine, two members from St. Louis Children's Hospital, and one member from the Barnard Free Skin and Cancer Hospital. (Jewish Hospital had not fully entered negotiations at this point.) This issue was finally resolved, whereby each member institution has two representatives on the Board, except Barnard, which has one representative.²¹

As finally evolved, the medical center organization permitted each of the member institutions to retain its individual powers and authority as well as its corporate identity, but enabled the center organization to act as a unit for such purposes as seeking substantial gifts from individuals and large national foundations which, but for the existence of the center organization, might not be made to the separate institutions.²²

On March 10, 1962, an *Agreement for Creation of a Medical Center* was signed by Washington University, the Barnes Hospital Trustees, Barnard Free Skin and Cancer Hospital, St. Louis Children's Hospital and the Jewish Hospital of St. Louis, creating the Washington University Medical School and Associated Hospitals (WUMSAH) to be organized as a corporation under the General Not-for-Profit Corporation Law of Missouri. WUMSAH was formally incorporated on May 31, 1962.²³ The purposes of this corporation were as follows:

(1) To improve the knowledge, teaching and practice of medicine and related subjects.

(2) To assist in the advancement of medical research and investigation.

(3) To provide and assist its member organizations in providing hospital facilities, physical properties and programs appropriate for the care and treatment of patients of the staffs of the hospitals, for the teaching and training of medical auxiliary personnel and for medical research.

(4) To solicit, receive, administer and manage funds and other property from whatever sources and of whatever kind for the advancement of medical teaching, research and care.

(5) To apply its funds to the pursuit of its general purposes, whether through its own enterprises or by contribution to the general or specific support of its several member organizations.

(6) To coordinate the hospital, educational and scientific activities of its member organizations and to provide for coordinated planning of the development of the medical

center through the voluntary cooperation of its member organizations.

(7) To cooperate with other individuals and groups in the carrying out of its general purposes.

(8) To acquire property and provide facilities for advancement of medical teaching, research and patient care.

(9) To serve as a planning and advisory agency for the Washington University School of Medicine and for the member hospitals with respect to physical facilities, fund raising, budgeting and other matters of mutual concern.²⁴

According to the WUMSAH agreement of March 10, 1962, the President of the Medical Center is appointed by the Medical Center Board of Directors, subject to approval of each of the governing bodies of the member institutions and of the Executive Faculty of the Washington University School of Medicine. The President is the Chief Executive Officer of the Center, attending the Medical Center Board sessions, but without a vote. His duties include the following:

(1) Responsibility for overall direction of the center and recommendations to the center board regarding center policies and programs.

(2) Attending sessions of the boards of directors (or trustees as the case may be) of the affiliated hospitals, of the Washington University Corporation (Board of Directors) and of the Executive Faculty of the Washington University School of Medicine.

(3) Preparation and administration of the medical center budget.

(4) Consultation with the appropriate administrative officers of the affiliated institutions in the preparation of their budgets.

(5) Coordination of the educational, research and health care interests of the member institutions and other facilities of the center.

(6) Appointment and supervision of an administrative staff to assist him in performing his duties and responsibilities as authorized by the center board.

Having established the medical center organization, the question arose, "Who was to run it?" For the next two years, member institutions were unable to agree on the nature of the man who would fill such a post. The Barnes Hospital Trustees felt he should be primarily an administrator, whereas the university officials felt he should be a physician of outstanding rank in the country concerned with the advancement of

medicine, medical education and medical research. It was these two different but interrelated functions, of the hospitals on one hand providing patient care and the university on the other hand concerning itself with medical education and research, that underlay this conflict.²⁶

This difference of opinion was further intensified by dissatisfaction on both sides with the existing 1949 contract between Washington University and Barnes Hospital. In an effort to resolve these difficulties, hospital and university officials agreed late in 1963 to bring in two neutral consultants, Dr. Joseph C. Hinsey, Director of the New York Hospital-Cornell University Medical Center, and Dr. John H. Knowles, General Director of the Massachusetts General Hospital and Lecturer in Medicine at Harvard Medical School, just as outside consultants were brought in to help resolve the earlier contract dispute in 1940. The Hinsey-Knowles report submitted in April, 1964, recommended among other things:

- (1) The creation of a joint executive committee composed of hospital trustees and university directors with responsibility for operating policies of Barnes Hospital and the School of Medicine.

- (2) The creation of the new position of Vice Chancellor for Medical Affairs at Washington University, and that the man appointed to this post also be named President of the Medical Center.²⁷

Subsequent to the Hinsey-Knowles recommendations, Dr. Carl V. Moore, Buseh Professor and head of the Department of Medicine at Washington University, was appointed Vice Chancellor for Medical Affairs in June, 1964, and later became President of WUMSAH.²⁸

On December 2, 1964, Washington University and Barnes Hospital announced the signing of a new 30-year contract to supersede the 1949 contract. Under the provisions of the new contract, Barnes continues to operate both the hospital-owned and university-owned buildings in the medical center, while the School of Medicine continues to provide the entire professional staff for all the hospitals and clinics. The new contract incorporated several basic changes in the two institutions' financial relations, resulting from the fact that difficulties between the hospital and university governing bodies in the face of a growing financial crisis at Barnes were a fundamental element in the dispute between them. The new agreement specified that Barnes would consolidate the accounts for all the units it operated. If there were an operating deficit

in any one year, it would be shared equally by the hospital and the university. If there were an operating surplus, it would also be shared equally. The contract provided for maintenance of a reasonable level of working capital, to which both Barnes and the university would contribute.

In addition, the university agreed to proceed with the design and construction of a new St. Louis Maternity Hospital, and with the renovation and air-conditioning of McMillan Hospital when funds became available. For its part, Barnes agreed to reopen the third floor of the Clinics Building, which had been closed since February, 1964, for reasons of economy.

Incorporating the essence of the Hinsey-Knowles recommendation for a joint executive committee, the new contract established a six member joint committee to review questions growing out of contract interpretations that could not be settled by the Barnes and medical school administrators. Disagreements over accounts, if not resolved by independent auditors, were arbitrated by a certified public accountant selected by both groups.²⁹

As of July 1, 1965, Dr. Carl V. Moore returned to full-time teaching and administration of the Department of Medicine, whereupon Dr. William H. Danforth, Associate Professor of Medicine at Washington University and President of the Danforth Foundation, was appointed Vice-Chancellor for Medical Affairs and subsequently became President of the Medical Center.³⁰ Dr. Danforth continues in both of these capacities at the present time.*

In November 1965, the Central Institute for the Deaf joined WUMSAH, thus increasing to six the number of permanent institutions belonging to the medical center organization.³¹ Since 1965, university and hospital officials have cooperated through WUMSAH to acquire the St. John's Mercy Hospital property, located in the midst of the medical center, which is now used for badly-needed parking space. In addition, plans have been developed for the complete renovation of Barnes Hospital and St. Louis Maternity Hospital, which is currently in progress.³²

Without doubt, the most important contribution of WUMSAH to the development of the medical center is the open lines of communica-

*Since the date upon which this paper was submitted to MISSOURI MEDICINE, Dr. William H. Danforth has been named Chancellor of Washington University (effective July 1, 1971). His successor as Vice-Chancellor for Medical Affairs and President of the Medical Center is Dr. Samuel B. Guze, Professor of Psychiatry and formerly Assistant to the Dean of Washington University School of Medicine.

tion it provides. According to Mr. George S. Hecker, former President of the Board of Directors of the Barnard Free Skin and Cancer Hospital, and WUMSAH Board Treasurer and Secretary at various times until 1968:

"I believe that the existence of the WUMSAH Board as an effective body contributed a great deal to the resolution of the conflict between the university and [Barnes Hospital] during the early 1960's. The Board itself was a facility by which Dr. [Edward] Dempsey and . . . Edgar Queeny representing their two institutions were required to meet together and, because the conflict between these two institutions affected very seriously the present and the future of the other member institutions of the center, the representatives of the other center institutions brought a great deal of pressure collectively to bear upon the warring parties to resolve their differences in closed session . . . the parties in meeting in common at the Medical Center Board level find it extremely difficult to join battle, one with the other, or one against others, because of open communication existing now between all the institutions in the medical center at the highest levels and their coordinated efforts in planning."³³

It is probable that the differences between Barnes Hospital and the Washington University School of Medicine would have been resolved even without WUMSAH, just as the earlier differences of opinion were resolved in the 1940's. Nevertheless, Mr. Hecker's comment indicates that the road to hospital-medical school reconciliation would have been considerably rougher than it otherwise was. Certainly this experience showed the need for WUMSAH, just as other large medical centers in the United States have been compelled to create Medical Center Boards for planning, fund raising, and coordinating center operations. Thus, WUMSAH gives promise that, despite inevitable differences of opinion between medical school and hospitals, the partnership of medical education and patient care will continue to grow and prosper at the Washington University Medical Center.

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—Photo by Jim Thompson, *Springfield Leader-Press*

(Above) Alan Bloom (left), HEW official, is welcomed at Springfield airport by Eighth District Councilor Howard J. McAlhany and MSMA President Gerald L. Miller. (Above, right) Dr. Michael Clarke (right) accepts AMA certificate from Dr. Oral Crawford, president of Greene County Medical Society. (Bottom, right) President Miller, Councilor McAlhany and Mr. Bloom appear on TV panel.

HEW Official, MSMA President Speak at Eighth Councilor District Meeting

Alan Bloom of Rockville, Md., special assistant on group practice development for the U. S. Department of Health, Education and Welfare, and Gerald L. Miller, M.D., President of the Missouri State Medical Association, spoke to some 200 area physicians and their wives at the Eighth Councilor District meeting at Holiday Inn in Springfield on September 9.

Mr. Bloom, who is a community health services specialist, detailed the federal administration's designs for a voluntary system of improving the delivery of medical health care by centralizing some service under a locally-operated Health Maintenance Organization (HMO).

President Miller commented on problems of organized medicine and the status of the statewide peer review system in Missouri. He said that he believes the profession is making headway on its problems, including the shortage of doctors in rural areas.

The meeting received unusual press coverage in Springfield. In addition to a press conference upon the arrival of Mr. Bloom at the Springfield airport, the two speakers appeared at two television stations. Also, representatives of the Springfield newspaper, radio and tv stations

were invited to a special luncheon for the press and the dinner meeting.

A highlight of the evening was the presentation of an American Medical Association certificate for humanitarian service to Dr. Michael Clarke of Springfield. Doctor Clarke, who returned from a two-month medical mission to war-torn South Vietnam last May, was presented the award by Greene County Medical Society President Dr. Oral Crawford, who expressed heartfelt congratulations from members of Springfield's community of physicians.

Doctor Clarke, who opened his practice in Springfield in 1952, served for 60 days in a 100-bed hospital operated by a Roman Catholic medical missionary group in the city of Qui Nhon.

Mrs. William M. (Pat) Walker, Immediate Past-President of the MSMA Woman's Auxiliary, appeared on the program to urge the physicians to encourage teachers and youth to attend the second Health Careers Fair to be held in Springfield on October 14-16.

Doctor Miller invited Greene County Medical Society's famous "Singing Doctors" to appear at the MSMA Annual Session in Kansas City on April 6-9, 1972 and praised the group as "musical ambassadors" for the medical profession.

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Precautions: As with other thyroid preparations, an overdosage may cause diarrhea or cramps, nervousness, tremors, tachycardia, vomiting and continued weight loss. These effects may begin after four or five days or may not become apparent for one to three weeks. Patients receiving the drug should be observed closely for signs of thyrotoxicosis. If indications of overdosage appear, discontinue medication for 2-6 days, then resume at a lower dosage level. In patients with diabetes mellitus, careful observations should be made for changes in insulin or other antidiabetic drug dosage requirements. If hypothyroidism is accompanied by adrenal insufficiency, as Addison's Disease (chronic subcortical insufficiency), Simmonds's Disease (panhypopituitarism) or Cushing's syndrome (hyperadrenalism), these dysfunctions must be corrected prior to and during SYNTHROID (sodium levothyroxine) administration. The drug should be administered with caution to patients with cardiovascular disease; development of chest pains or other aggravations of cardiovascular disease requires a reduction in dosage.

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1. Loans will be granted by the Missouri State Medical Foundation Student Loan Committee on the basis of financial need of the student and with due consideration of the student's background, references, academic achievement, etc.
2. Loans will be made for any worthy purpose directly connected with furtherance of the student's medical education, including tuition, fees, books, equipment needed for medical education, necessary living expenses while in residence at the school, etc.
3. Ordinarily, the maximum loan for any student for any one school year will be \$1,500. A student holding one or more loans from the Foundation or any similar loan fund shall be eligible to apply for further assistance if the need exists, but such assistance shall not be obligatory on the Foundation Committee.

4. Proceeds of the Loan will be paid to the student for disbursement.
5. Decisions of the Foundation Student Loan Fund Committee in granting of loans will be final.

INTEREST AND REPAYMENT PROVISIONS

1. Loans will bear interest at the rate of 2% per annum from the date of the loan through two years after the date the recipient begins the practice of medicine. Such interest may be paid at the student's option at any time after receipt of the loan, but payment of interest is not obligatory until the principal of the loan becomes due and payable.
2. The principal of the loan, and accrued interest, will become due and payable one year after the date the recipient begins medical practice, with the provision that repayment shall be completed in no more than four additional years from the date and that no less than one fifth of the total original principal, plus accrued interest, shall be due each year.
3. On the date the principal of the loan becomes due, the interest rate on the unpaid balance increases to 4% per annum, and increases by 2% per year thereafter, to a maximum of 8%.
4. The recipient of the loan will have the privilege of prepayment of principal and interest in any amount at any time prior to due date and without penalty.
5. Loans will be secured by a legal note in a form approved by the Foundation Committee. Co-signature is not required.

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Dr. M. Pinson Neal, 84, Begins His 50th Year at Missouri University's School of Medicine

Author of Recently-Published Book

"I started medical school in 1908 at the University College of Medicine in Richmond (Va.) and during the second winter, the building burned. To continue the medical school, the one place available was a deserted tobacco factory. We completed our medical education in that old building which had been divided into sections by beaverboard for our purposes. I'm a graduate of a tobacco factory!"

This tobacco factory graduate, Dr. M. Pinson Neal, is in his 50th year with the University Medical Center. Doctor Neal retired in 1963 but, at 84, he continues to render voluntary service for the Pathology Department. He came to the Medical Center in September, 1922, as professor of pathology and department chairman. From 1937 until 1946, the Department of Pathology and the Department of Medical Bacteriology-Preventive Medicine-Hygiene were the same with Neal as chairman. In 1946, the two departments were separated and Neal again became chairman of pathology. In addition, he served as acting dean of the School of Medicine from Sept. 8, 1951 to June, 1953, when illness required him to relinquish the deanship. In 1954, he also voluntarily gave up the chairmanship of the Pathology Department. In June, 1958, Doctor Neal was made Professor Emeritus of Pathology.

In his recently published book, "The Genesis, Heritage and Progress of Medical Education at the University of Missouri," Doctor Neal traces the history of the Medical School here from its beginning in 1841 until the present time.

One of the hardest times for the Medical School, Doctor Neal recalls, was in 1932 when the school was forced to go from a four-year school to a two-year school due to the depression. "Everyone, from the president to the lowliest man who picked up paper, got a 15% salary cut," he says.

According to Doctor Neal's book, the curators authorized the establishment of the third and fourth years of the Medical School in the fall of 1930. Six students enrolled in this third year, but the program was suspended in August, 1932,



M. Pinson Neal, M.D.
Professor Emeritus of Pathology

To mark the beginning of Dr. M. Pinson Neal's 50th year at the University of Missouri-Columbia School of Medicine and his 84th birthday, more than 400 former students, colleagues and friends met for a reception in his honor in the Alumni Lounge of the Memorial Student Union on Sept. 24, 1971. Hundreds of other former students sent messages.

Among the distinguished guests in attendance were Dr. and Mrs. M. Pinson Neal, Jr. of Richmond, Va. Doctor Neal, Jr. is assistant vice-president for health sciences and interim dean of the School of Medicine at Virginia Commonwealth University.

The accompanying story describes Doctor Neal's colorful career, his recently-published book and his faith in the future of the School of Medicine. It was written by Miss Trisha Vandiver of The Columbia Tribune and is reprinted here by special permission of that newspaper.

and "The Big Six" were all accepted with full credit as seniors by other medical schools.

The University of Missouri Medical School dates back to MU's connection with Kemper College in 1841. In 1873, "The Medical Department of the University of Missouri" enrolled 15 students in the two years' prescribed work for a doctor's degree. The extended four-year course began on the campus in 1899 and continued until 1910 when, as a result of the Flexner Report on medical schools across the country, the number of medical schools in Missouri was cut from 44 to three and MU's program was cut to two years, with students here completing their training at other medical centers. In 1955, the University of Missouri Medical School established its four-year program on the Columbia campus and, in November, 1956, the Medical Center was opened.

The MU School of Medicine has a "captivating past, a challenging present and an unbelievable future," Neal said in the foreword to the Alumni Medical Directory of 1969.

"During my 63 years related to medicine as a student, teacher, investigator and practitioner, much has happened in medicine, more in the past 20 years than in several previous generations or even during some centuries," Doctor Neal says. "Out of my own personal experience, I am convinced that this Medical School can do

what must be done, indeed, can do more, and will. Its future is unlimited."

—*The Columbia Tribune*

* * *

M. Pinson Neal, M.D., joined the Missouri State Medical Association in 1923 and has been active in its affairs since that date. A member of Boone County Medical Society, he has served as Delegate and Alternate Delegate to the MSMA House of Delegates; Councilor for the Fifth District, Chairman of the Council and Vice-President. He also has served as Alternate Delegate from the MSMA to the AMA House of Delegates.

At the 111th Annual Session of the Association in St. Louis on March 23, 1969, a resolution honoring Doctor Neal was introduced in the House of Delegates by Dr. G. Donald Shull, Jefferson City. After it was adopted by a unanimous vote, Doctor Neal received a standing ovation.

The resolution reads as follows:

WHEREAS, The Membership of the Missouri State Medical Association recognizes that the evening shadows are lengthening upon the life of one of their distinguished colleagues, and

WHEREAS, This distinguished physician, teacher and tireless worker for the Missouri State Medical Association has earnestly endeared himself to his legions of friends and former students, and

WHEREAS, His ideals, principles and devotion to his profession and its members have favorably influenced the life of physicians throughout the United States, and

WHEREAS, This body assembled wishes to express its sincere gratitude and esteem for this distinguished elder statesman of medicine, be it therefore

Resolved, That the Missouri State Medical Association at its 111th Annual session in St. Louis, Missouri, on the 23rd day of March, 1969, does hereby take this opportunity to recognize the outstanding services and contribution of M. Pinson Neal, M.D., to the medical and teaching profession, and be it further

Resolved, That a copy of this resolution be duly signed by the President, Secretary and Councilors of the Missouri State Medical Association and forwarded to Dr. M. Pinson Neal with the best wishes of the membership of the Missouri State Medical Association.

The American College of Surgeons has scheduled three sectional meetings in 1972: January 17-19, Miami; February 14-16, St. Louis; March 13-15, Philadelphia, the annual combined meeting for doctors and nurses. All doctors of medicine may attend ACS meetings. Surgeons of outstanding ability will focus attention on newer ways of handling surgical problems through panels, symposia, "How-I-Do-It" clinics, scientific papers and selected films. Each meeting features sessions in general surgery plus two or more surgical specialties.

IMPROVED ACCIDENT & HEALTH PROGRAMS

The Disability Income Policy sponsored by the Missouri State Medical Association since 1943 has now been made GUARANTEED RENEWABLE and income benefits are available up to \$300.00 weekly to members under age 56 subject to acceptance by the Company.

Also, the Major Hospital and Nurse Expense Program offers higher limits with increased Room & Board Benefits.

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Dr. Robert N. Crews At Century Mark



—Photo Courtesy of Fulton Sun-Gazette

Robert N. Crews, M.D.

Dr. R. N. Crews of Fulton celebrated his 100th birthday on Sept. 11, 1971.

Doctor Crews practiced medicine in Callaway County longer than any other medical doctor. At the age of 95, he was believed to be the oldest practicing physician in Missouri.

Born in News Ferry, Va., Doctor Crews' early schooling was in a one-room country school. He began preparing for a career in medicine with two years at Virginia Poly Tech in Blacksburg, Va. While in college, he lost his parents. Finances became a problem, so he moved to Missouri where he worked as a farm laborer to earn money to continue his education.

He attended the University of Missouri for one year and Barnes Medical College in St. Louis for two years. To help finance his studies, he worked as an operating room nurse in St. Louis City Hospital for \$35 per month (12 hours per day, seven days per week). He received his degree in medicine from Barnes Medical College on March 17, 1896.

Doctor Crews continued his schooling with postgraduate studies at Chicago Poly Tech, New York Graduate School, Massachusetts General Hospital and Washington University.

He began his practice of medicine on Oct. 17,

1896 in Williamsburg, Mo., where he used horses and a buggy for house calls. Twelve years later, he moved to Fulton where he practiced for 60 years, retiring in September, 1969.

In 1901, Doctor Crews married Miss Jane Yates. Their four children are Martha, who is City Librarian for New York City; Mary, who was married to the late Dr. J. P. Palmer of Buffalo, N. Y.; Sara, who is married to Rev. T. Watson Street, Nashville, Tenn.; and Dr. Carroll Crews, a practicing dentist in Fulton.

Doctor Crews has been a member of the Missouri State Medical Association since 1908. Throughout the years, he has served Callaway County Medical Society as President, Secretary, Delegate and Alternate Delegate to the MSMA House of Delegates.

A centennial birthday anniversary dinner honoring Doctor Crews was attended by his family, and many of his friends visited him during the day.

Doctor Crews does not hear, but enjoys life and is grateful for his sight and good physical health as a centenarian. He has credited his long life to keeping active mentally and physically, moderation in all things, plenty of protein in his diet and a long nap after dinner.



Health, Education and Welfare Secretary Elliot L. Richardson approved a proposed regulation to authorize insurance carriers to issue contracts for prepaid group medical service to persons in any state regardless of any restrictive state law.

Authority for the proposed regulation was granted by Congress last year in a law sponsored by Sen. Edward M. Kennedy (D.-Mass.) who also is the chief Congressional sponsor of organized labor's all-out national health insurance proposal. Under the terms of the law, the secretary of HEW can authorize insurance carriers who provide coverage through the Federal Employee Health Benefits program to issue contracts for the group medical services.

Forty-one prime health insurance carriers presently provide coverage through FEHBP. The actual number of insurance carriers affected by the law could total in the hundreds because of re-insurance contracts between prime carriers and other insurance providers, according to a spokesman for the department's Office of Group Practice Developments.

The regulation allows the HEW secretary to authorize the insurance companies "to issue in any state contracts entitling any person as a beneficiary to receive comprehensive medical services from a group practice unit or organization" with which the company has contracted for the provision of group services.

The proposed regulation would be to override those restrictions, "enabling insurance carriers to issue contracts for prepaid group medical services to any individual in any state," an HEW announcement said.

HEW said as many as 50 million residents of the 20 states with laws restricting group practice could become eligible for group health plans. Such plans, as described in the proposed rules, offer preventive, diagnostic and therapeutic medical services in a single organization on a prepaid basis.

"A medical group . . . shall include at least a general practitioner and representatives of each of the following medical specialties: general sur-

gery, obstetrics, internal medicine, pediatrics and ear-nose-throat," the proposal said.

Kennedy applauded HEW's move, but criticized the delay.

"The cause of the delay is no secret," he said in a statement. "For months the profitmaking commercial industry fought to obtain a larger role." He said that while the intent of Congress prevailed the delay shows "the virtual stranglehold the health insurance lobby has on this administration."

* * *

The American Medical Association told Congress that the attack on cancer can be most effectively conducted through the National Cancer Institute within the National Institutes of Health, rather than through a separate and autonomous agency.

Testifying before the House Health and Environment Subcommittee, Franz J. Ingelfinger, M.D., editor of the *New England Journal of Medicine* and a member of the Advisory Committee on Medical Sciences to the AMA's Board of Trustees, said that "the effort to cure cancer will have to be a coordinated effort with full involvement of all the national institutes (of health)."

"There is another compelling reason to retain the cancer program within NIH and that is to keep the NIH intact rather than have it become fragmented into independent agencies," Doctor Ingelfinger said. "Under the latter conditions, the agencies would be competing for support and recognition rather than collaborating for scientific progress. The NIH is generally regarded in the international scientific community as one of the most splendid scientific achievements of the 20th century. To impair the effectiveness of this productive organization would be unwise. The integrity of the NIH should be maintained and increased support provided."

Doctor Ingelfinger expressed opposition to a compromise measure passed by the senate which would create a new independent Conquest of Cancer Agency within the NIH. He said that the autonomy proposed for such a new agency would "threaten the structure of the National

Institutes of Health and impair research efforts in all fields."

Doctor Ingelfinger cautioned against expecting any quick victory over cancer. "We believe . . . that false hopes should not be created and that people should not be led to believe that with enough money and enough effort cancer will quickly be conquered," he said. "Although many encouraging developments have occurred in the last few years that justify the major national effort proposed in House Bill 10681, the problems to be solved are very complex. Much basic research work remains to be done. Everyone should be prepared for steady but, perhaps, slow progress. We should also recognize that chance discoveries by scientists working in totally different fields may set the stage for significant future progress. This has occurred repeatedly in the history of scientific discovery, and consequently basic scientific research should be allowed a high degree of individuality and spontaneity.

" . . . the American Medical Association advocates a program attacking cancer through greatly intensified and coordinated research efforts. We believe that in the interests of the public and in order to avoid any splintering of efforts, the program, adequately funded, should be administered within the National Institutes of Health under a Director having responsibility for all biomedical research."

Other AMA presentations on national legislation include the following:

Physician Shortage Areas. The AMA supported legislation that would provide federal aid to individual or small groups of physicians in establishing medical practices in rural areas, small towns and low income inner-city areas.

The legislation (S. 2269) would amend the National Housing Act to authorize mortgage insurance for the construction and rehabilitation of medical facilities for the practice of one to four physicians in physician-shortage areas. In 1966, mortgage insurance was authorized for establishment of non-profit group practices. The current legislation would extend that program.

"The American Medical Association supports a pluralistic system of delivery of health care embracing various forms of health care delivery. Each type of health care delivery mechanism, including group practices, has its advantages. The group-type of practice, however, is neither feasible nor desirable for all of the nation's physicians. . . .

"It is readily apparent that not all areas will attract the same kind of group practice, nor

could a rural area support the establishment of the same type of practice as might be set up in larger, more urban communities.

"S. 2269, by providing financing assistance, may help to stimulate the establishment of a medical practice by an individual practitioner or a small group of physicians in small and rural communities and inner city areas having physician shortages.

"In considering these amendments, we believe the provisions in the bill concerning the maximum loan should be reviewed. We recommend that the limitation of \$150,000 should be raised so as not to preclude the establishment of a facility with potentially broad health delivery capability where such facility and staff were warranted in a community. The figure proposed in the bill might act to limit construction of beneficial facilities in certain areas."

National Institute for Health Care Delivery. The AMA questioned the desirability of establishing a National Institute for Health Care Delivery. In a letter to Sen. J. Glenn Beall, Jr. (R.-Md.), who made the proposal and invited AMA's comment, Ernest B. Howard, M.D., AMA executive vice president, said:

"As we understand your proposal, a National Institute of Health Care Delivery would be established, for the purpose of developing improvements in health care delivery, the Institute being perhaps comparable to NIH and NASA. Through the use of 'think tanks' and developmental labs, the institute would examine our existing health care system and design and test components of a new one.

"Our health delivery system is constantly responding to improvements in medicine as they



"Did you buzz, Mr. Fogg?"

are developed. These changes occur through many means—the medical schools, university and other hospitals, clinics, continuing education (both formal and informal) and community practices of all types. One of the strengths of our health care system is its pluralistic nature which can absorb and respond to changes as new medical and scientific knowledge is developed.

"Your pursuit for improvements in our health care delivery is a most laudable one, and one in whose objectives the medical profession shares. We have some reservations, however, as to whether improvements in our health delivery system can respond in the laboratory in the same manner as medical or scientific research or the NASA program. Many of the elements of our health care delivery, some referred to in your comments, are currently under careful examination and experimentation.

"Your proposal would apparently parallel in many respects the National Center for Health Services Research and Development, only recently created, and it is not clear how the two would relate to each other. Perhaps an expansion of activities of the existing center should be the vehicle for the contemplated programs."

Announcement

American Board of Family Practice

EXAMINATION

The American Board of Family Practice announces that it will give its next examination for certification in various centers throughout the United States. The examination will be over a two-day period on April 29-30, 1972. Information regarding the examination can be obtained by writing:

Nicholas J. Pisacano, M.D., Secretary
American Board of Family Practice, Inc.
University of Kentucky Medical Center
Annex #2, Room 229
Lexington, Kentucky 40506

PLEASE NOTE: Deadline for receiving completed applications in the Board office is February 1, 1972.

Pre-Sate® (chlorphentermine hydrochloride)

Caution: Federal law prohibits dispensing without prescription.

Indications

Pre-Sate (chlorphentermine hydrochloride) is indicated in exogenous obesity, as a short term (i.e. several weeks) adjunct in a regimen of weight reduction based upon caloric restriction.

Contraindications

Glaucoma, hyperthyroidism, pheochromocytoma, hypersensitivity to sympathomimetic amines, and agitated states. Pre-Sate (chlorphentermine hydrochloride) is also contraindicated in patients with a history of drug abuse or symptomatic cardiovascular disease of the following types: advanced arteriosclerosis, severe coronary artery disease, moderate to severe hypertension, or cardiac conduction abnormalities with danger of arrhythmias. The drug is also contraindicated during or within 14 days following administration of monamine oxidase inhibitors, since hypertensive crises may result.

Warnings

When weight loss is unsatisfactory the recommended dosage should not be increased in an attempt to obtain increased anorexic effect, discontinue the drug. Tolerance to the anorectic effect may develop. Drowsiness or stimulation may occur and may impair ability to engage in potentially hazardous activities such as operating machinery, driving a motor vehicle, or performing tasks requiring precision work or critical judgment. Therefore, such patients should be cautioned accordingly. Caution must be exercised if Pre-Sate (chlorphentermine hydrochloride) is used concomitantly with other central nervous system stimulants. There have been reports of pulmonary hypertension in patients who received related drugs.

Drug Dependence Drugs of this type have a potential for abuse. Patients have been known to increase the intake of drugs of this type to many times the dosages recommended. In long-term controlled studies with the high dosages of Pre-Sate, abrupt cessation did not result in symptoms of withdrawal.

Usage In Pregnancy The safety of Pre-Sate (chlorphentermine hydrochloride) in human pregnancy has not yet been clearly established. The use of anorectic agents by women who are or who may become pregnant, and especially those in the first trimester of pregnancy, requires that the potential benefit be weighed against the possible hazard to mother and child. Use of the drug during lactation is not recommended. Mammalian reproductive and teratogenic studies with high multiples of the human dose have been negative.

Usage In Children Not recommended for use in children under 12 years of age.

Precautions

In patients with diabetes mellitus there may be alteration of insulin requirements due to dietary restrictions and weight loss. Pre-Sate (chlorphentermine hydrochloride) should be used with caution when obesity complicates the management of patients with mild to moderate cardiovascular disease or diabetes mellitus, and only when dietary restriction alone has been unsuccessful in achieving desired weight reduction. In prescribing this drug for obese patients in whom it is undesirable to introduce CNS stimulation or pressor effect, the physician should be alert to the individual who may be overly sensitive to this drug. Psychologic disturbances have been reported in patients who concomitantly receive an anorectic agent and a restrictive dietary regimen.

Adverse Reactions

Central Nervous System: When CNS side effects occur, they are most often manifested as drowsiness or sedation or overstimulation and restlessness. Insomnia, dizziness, headache, euphoria, dysphoria, and tremor may also occur. Psychotic episodes, although rare, have been noted even at recommended doses. **Cardiovascular:** tachycardia, palpitation, elevation of blood pressure. **Gastrointestinal:** nausea and vomiting, diarrhea, unpleasant taste, constipation. **Endocrine:** changes in libido, impotence. **Autonomic:** dryness of mouth, sweating, mydriasis. **Allergic:** urticaria. **Genitourinary:** diuresis and, rarely, difficulty in initiating micturition. **Others:** Paresthesias, sural spasms.

Dosage and Administration

The recommended adult daily dose of Pre-Sate (chlorphentermine hydrochloride) is one tablet (equivalent to 65 mg chlorphentermine base) taken after the first meal of the day. Use in children under 12 not recommended.

Overdosage

Manifestations: Restlessness, confusion, assaultiveness, hallucinations, panic states, and hyperpyrexia may be manifestations of acute intoxication with anorectic agents. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension, or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma.

Management: Management of acute intoxication with sympathomimetic amines is largely symptomatic and supportive and often includes sedation with a barbiturate. If hypertension is marked, the use of a nitrate or rapidly acting alpha-receptor blocking agent should be considered. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendations in this regard.

How Supplied

Each Pre-Sate (chlorphentermine hydrochloride) tablet contains the equivalent of 65 mg chlorphentermine base; bottles of 100 and 1000 tablets.

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Notes of interest from Here

. . . .

and There

Dr. Arthur W. Neilson, St. Louis, has been reelected to his second term as president of the 350-member Deaconess Hospital medical staff. **Dr. Ernest H. Schaper** will serve as president-elect. Other new officers include **Drs. Francis S. Walker**, vice-president; **Ruth C. Comens**, secretary-treasurer; **Robert K. Dorton**, representative, Department of Medicine; **John P. Arnot**, representative, Department of Surgery; and **Benjamin F. Smith**, representative, Department of Obstetrics-Gynecology.

Dr. Liam O'Brien, superintendent of the St. Joseph State Hospital, was elected a councilor of the National Association for Medical Superintendents at the group's annual convention in Seattle, Wash. recently.—**Dr. F. L. Edwards** has retired after practicing medicine in Monett for the past 20 years. Doctor Edwards moved to Monett from Pierce City, where he practiced for three years after serving in the U. S. Army.

Dr. Joan Goebel, an anesthesiologist in St. Louis since 1945, will leave this month on a personal medical mission project of three or four months in Africa. She plans to teach new techniques in anesthesiology to nurses at a hospital in Berekum, Ghana, which is operated by the Medical Mission Sisters. Doctor Goebel accepted the invitation and, at her own expense, will make the expedition. She will travel by freighter and will take donated equipment and drugs to be used in her training mission.

Dr. Robert N. Myers, Kansas City, was the guest speaker at the dedication services for the new Christian Church sanctuary in Drexel. Doctor Myers, who is a past-president of both the Missouri and Kansas City Academies of General Practice, also is an ordained Christian Church minister and has served many churches as an interim or guest minister.—**Dr. B. M. McLain** of Poplar Bluff has been reelected to the Board of Directors of the Missouri Chamber of Commerce. Doctor McLain will represent District 21 of the Missouri Chamber.

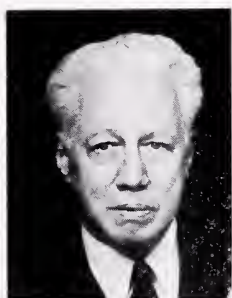
Dr. Sisenando P. Galvez, Jr., a specialist in internal medicine, has established his practice in Marceline, where he is associated with **Drs. George Gary, Theodore George** and **George Mandler**. Doctor Galvez served his internship at Lutheran Hospital in St. Louis.—**Dr. Vic Kwan** will practice general medicine in association with **Dr. Kirby Turner** in Flat River. A specialist in internal medicine and heart and chest diseases, Doctor Kwan will be the hospital cardiologist and the director of the intensive coronary care unit at Washington County Memorial Hospital.—**Dr. Hiremathada P. Jayanandaiah** has begun practice at the Hannibal Clinic where he is specializing in internal medicine. A native of India, "Dr. Jay" has been in practice at the Nevada State Hospital in Nevada, Mo.

From the Medical Schools



WASHINGTON UNIVERSITY

Carl V. Moore, M.D., Busch Professor and head of the Department of Medicine, School of Medicine, received the Association of American



Dr. Carl V. Moore

Medical Colleges' Abraham Flexner Award for Distinguished Service to Medical Education for 1971. The gold medal was presented on October 30 at the Association's 82nd annual meeting in Washington, D. C.

The award, established in 1958, is named for the educator, commissioned by the Carnegie Foundation for the Advancement of Teaching, who made a 1910 landmark study of medical schools in the United States and Canada. Flexner's report was so scathingly critical of the quality of medical education that the medical profession and the public mobilized an immediate effort for reform. This resulted in much higher standards of accreditation and the trend of most medical schools to become affiliated with universities.

In 1970, Doctor Moore was elected to the National Academy of Sciences and received the John Phillips Memorial Award, the highest honor of the American College of Physicians. He also was cited as one of 100 nationally prominent persons to get an Ohio State University Centennial Achievement Award.

A pioneer in the study of iron-deficiency anemia, Doctor Moore's contributions to the basic knowledge of the blood have been internationally acclaimed, and many of his students have made their marks in the medical field.

He is a member of the editorial boards of several medical journals including the *Journal of Nutrition* and the *American Journal of Medicine*.

Doctor Moore began teaching at Washington University in 1938 as an assistant professor of medicine. He was vice-chancellor in charge of medical affairs in 1964 and 1963.

Dr. Robert A. Moore, 70, former dean of Washington University School of Medicine, died on Sept. 24, 1971 in Kings County Hospital, Brooklyn, N. Y., after a prolonged illness.

From 1939 to 1954, Dr. Moore was Edward Mallinckrodt Professor of Pathology at Washington University. He served as acting dean in 1946-1947 and was dean from 1947 to 1954. He retired in 1966 as president and dean of the State University of New York Downstate Medical Center College of Medicine.

Doctor Moore was author of "Textbook of Pathology," published in 1944 and 1951, and contributed numerous papers in scientific journals on genitourinary pathology and on medical education.

ST. LOUIS UNIVERSITY

The coveted Alumni Merit Award of St. Louis University was given posthumously for the first time this year during Founders Week to the late Dr. Joseph Hardy, a 1926 alumnus of the School of Medicine, who died this spring. At the time of his death, Doctor Hardy was a clinical professor of gynecology and obstetrics at the University, while also maintaining a private practice. He headed the department of gynecology and obstetrics at the University from 1945 to 1962. He was founder of the American College of Obstetrics and Gynecology and former president of the St. Louis Gynecological Society. He was a member of the staffs of St. John's Mercy Hospital, St. Mary's Hospital and St. Louis City Hospital. The award was presented to Doctor Hardy's family at the Founders Week Awards Luncheon on October 15.

Nineteen members of the School of Medicine faculty were scheduled to receive 25-year service awards at the Founders Week Awards Luncheon. They are Drs. Charles E. Baldree, Jr., instructor in surgery; Seymour Brown, assistant clinical professor of surgery; Francis J. Burns, associate clinical professor of surgery; Charles R. Doyle, associate clinical professor of surgery; Jackson K. Eto, associate clinical professor of pediatrics; Wilbert M. Gansloser, assistant clinical professor of psychiatry; John V. King, instructor in surgery; Raymond A. Mezera, sen-

ior instructor in internal medicine; *James P. Murphy*, assistant clinical professor of internal medicine; *Paul Murphy*, clinical professor of internal medicine; *Harry K. Purcell*, associate clinical professor of surgery; *Alvin C. Schopp*, instructor in orthopedic surgery; *John S. Sciorino*, instructor in surgery; *Arthur A. Siniscal*, assistant clinical professor of ophthalmology; *Robert W. Stevens*, assistant clinical professor of gynecology and obstetrics; *Christopher G. Vournas*, assistant clinical professor of internal medicine; and *Emmett D. Wall*, assistant clinical professor of internal medicine.

Dr. Ralph L. Biddy, chief of staff, St. Louis Veterans Administration Hospital and assistant dean for Veterans Administration at the St. Louis University School of Medicine, has been named as recipient of the 1971 John Shaw Billings award. The award, a plaque and honorarium, is given annually in memory of LTC John Shaw Billings, to a member of the association of Military Surgeons of the United States under 41 years of age who possesses and demonstrates outstanding potential in the field of executive medicine. The award is given in cooperation with Eaton Laboratories, Division of Norwich Pharmacal Company. Official presentation will be at a Special Award program to be held Dec. 7, 1971 in Washington, D. C.

Dr. V. L. Willman, professor and chairman of the Department of Surgery, has been elected to membership on the American Board of Surgery as a representative of the American College of Surgeons. Doctor Willman's term of six years began on Sept. 1.

A new diagnostic x-ray machine designed and manufactured in France for earlier detection and diagnosis of breast cancer is in operation in the radiology department at the St. Louis University Hospitals. Known as the senograph, the machine is the first in Missouri. It was specifically designed for mammography and x-ray of the breast and can take pictures of soft tissue that are more revealing than those obtained with more conventional x-ray equipment which has been adapted for use on the breast. Last year in Missouri, 727 women died from breast cancer. The U. S. Public Health Service has reported that breast cancer is the leading cancer among women in this country.

A \$41,609 allocation from the Bi-State Regional Medical Program enables the coronary care nurses training program, headquartered in the St. Louis University Hospitals, to continue for another year teaching nurses from the region the specialized techniques of caring for cardiac

patients. These nurses will apply their new knowledge in community hospitals in their home towns.

UNIVERSITY OF MISSOURI-KANSAS CITY

Dr. John R. Hogness, president of the Institute of Medicine, National Academy of Sciences, delivered the principal address at the inauguration ceremony of the School of Medicine of the University of Missouri-Kansas City on October 18. The event officially recognized the launching of the new, innovative medical school which opened for classes on August 30 with 94 students.

A leading proponent of change from traditional medical educational methods to how they relate to health-care services, Doctor Hogness spoke on "New Directions in Medical Education and Health-Care Delivery."

The widely-known educator is the new and first head of the Institute which is regarded as a potentially valuable and impartial force that will help guide medical policies and decisions in both private and public sectors.

Doctor Hogness, who had been chairman of the Board of Health Sciences and director of the Health Sciences Center at the University of Washington, was offered the post of Assistant Secretary of HEW for Health, but chose to accept the Institute post last summer.

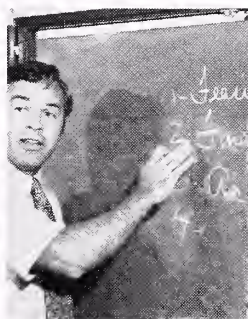
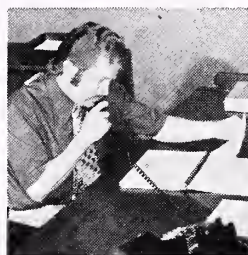
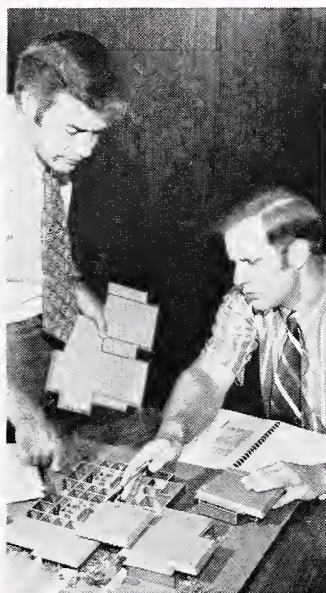
Among his recent committee appointments have been memberships on the advisory committee to the director of the National Institute of Health, advisory committee to the administrator of Health Services and Mental Health Administration, Secretary's Task Force on Medicaid and Related Programs of HEW and the Macy Commission for a Study of the Governance of the Academic Medical Center.

The Institute he heads eventually will have 400 elected members from the health professions and outside. The group is viewed as a valuable supplement to the work of existing organizations such as the Association of American Medical Colleges, the American Hospital Association, and the American Medical Association. It is also considered as an important research and advisory tool for the government and the public.

The UMKC Medical School, located on Hospital Hill at 22nd Street and Holmes Road, conducts classes in the former Research Hospital nursing residence, Dental School building, the Volker campus and seven hospitals in Kansas City with which there are affiliate agreements. Construction for a new medical school building is expected to start next January and be ready for occupancy two years later.

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H. RICHARD McFARLAND, M.D., *Kansas City*

Levodopa Therapy for Parkinson's Disease

A First-Year Experience with Outpatients in Private Practice

LATE IN 1969, application was made for the experimental use of levodopa in the treatment of Parkinson's disease. Twenty-six consecutive patients were treated privately between Jan. 1, 1970 and Dec. 31, 1970. The patients' ages ranged from 54 to 83 years. The majority were in their sixth or seventh decade, hence many patients demonstrated signs of cerebral arteriosclerosis and vascular insufficiency. Fourteen were women, and 12 were men. Four patients had tremor alone, and two had rigidity and akinesia alone (rigor and akinesia were always observed concomitantly and are not classified separately). Twenty patients showed signs of tremor, rigidity and akinesia.

Because of disability or patient request, ten of the 26 patients were initially treated in the hospital, but those remaining on the study have been followed as outpatients. Twenty-two of the 26 patients have been followed three or more months. Of the remainder, two have been followed well into their second month and two were unable to tolerate the drug. The maintenance dose of levodopa was 2 gm to 4 gm daily with an average of 3 gm.

Initial instructions to patients and procedures were as follows:

We have applied for and received approval from

the Food and Drug Administration to administer levodopa under the provisions of a program which we have outlined. The capsules which you receive contain levodopa 500 mg. (L-Dopa 500 mg capsules supplied by Nutritional Biochemicals Corporation, Cleveland, Ohio.) You are to begin by taking one capsule with meals, twice daily, thereafter increasing the dose by one capsule every two days until the desired therapeutic response occurs or adverse reactions to the drug develop, but do not exceed 16 capsules a day. Continue all other medicines for parkinsonism except amantadine (Symmetrel). The most frequent side effects are lack of appetite, nausea, vomiting and involuntary movements. Occasionally, hypotension occurs with symptoms of light-headedness or a tendency to lose consciousness, especially on standing up. Rarely, nervousness and insomnia are encountered. Patients with severe heart or kidney disease are not encouraged to enter this study. At the beginning of this program and at appropriate intervals, a neurological examination, cardiovascular examination, complete blood cell count (CBC), blood urea nitrogen test (BUN), serum glutamic oxaloacetic transaminase test (SGOT), protein-bound iodine test (PBI) and urinalysis shall be performed. At least in the beginning, white blood counts shall be obtained weekly. Any alarming side effects to the drug should be reported promptly to Doctor McFarland or his secretary.

In addition to examining their cardiovascular status and blood pressures when sitting and in a standing position, pulse, respiration, weight, general appearance and mental state, the patients were graded in three areas: mobility, strength and dexterity and neurologic examination (Fig. 1). All tests were performed by Doctor McFarland.

COMMENTS ON PROCEDURES

It was soon evident that 500 mg capsule increments every other day were poorly tolerated by the majority of the older patients. This instruction was changed to read, "Begin taking a 500 mg levodopa after meals for three days and then add one capsule at bedtime with a glass of milk or a snack." At the end of one week, the patient was reevaluated and new instructions were given, depending upon the patient's tolerance.

The mobility scale was too restrictive. Since

many patients walked alone and were either restricted or unrestricted, they had little room for improvement. Replacement of the "degree of mobility scale" by a disability examination for activities of daily living is suggested.¹ Although the patients were instructed not to practice the quantitative tests, learning, no doubt, was a factor as these assessments were repeated in the office. An objective neurologic examination, perhaps, was the fairest rating method, but when done by the treating physician it is qualitative, uncontrolled and prejudiced. Nevertheless, the three tests do permit the examiner to make an objective observation, a quantitation and a tactile and visual evaluation of patient change.

Grading was accomplished as follows. At the end of the study, the patient was given the maximum number he went up on the mobility scale (Fig. 1). For example, if he walked alone but went from mobile at home to unrestricted

LEVODOPA INVESTIGATIONAL STUDY

I. Mobility Rating			
A. Grade of Mobility (Circle one)		B. Degree of Mobility (Circle one)	
1. Unrestricted		1. Walks alone	
2. Restricted		2. Walks with cane or crutch	
3. Mobile at home only		3. Walks in or with a walker	
4. Chairbound at home		4. Walks with assistance only	
5. Bedridden		5. Cannot walk	
II. Strength and Dexterity, Quantitative Tests—			
(Record Number)			
Grip	—Dynamometer	R	L
Hand Supination—Pronation		R	L
(Taps audible in 15 seconds)			
Foot Tapping		R	L
(Taps audible in 15 seconds)			
III. Neurologic Examination			
(If present—Check ✓)			
Cranial Nerves			
Upward gaze limited			
Facial expression decreased			
Dysarthria			
Motor Exam			
Cannot rise from chair			
Cannot walk on toes			
Cannot complete a squat			
Coordination			
Tremor arm-hand		R	L
Tremor leg-foot		R	L
Tone			
Reflexes hyperactive arm—leg		R	L
Rigidity—arm		R	L
Rigidity—leg		R	L
LEVODOPA Mg:		Total number checks	
Side effects		Previous exam total	
		Previous date	

Fig. 1

in activity (three to one), he was given an improvement number of two. In testing strength and skills, he was assigned one point for improvement of grip, hand or foot dexterity so that he could be graded from zero to three. The neurologic rating was obtained by subtracting the final number of checks from the original number and recording the difference.

RESULTS

Of the 26 patients entering the study, 20 continue taking levodopa (Table 1). Two discontinued their medication due to intolerance for levodopa (500 mg capsules) despite postprandial administration, cyclizine (Marezine) and antacids. One patient developed an organic psychosis with confusion, disorientation and terrifying hallucinations which required complete discontinuance, since these symptoms were not relieved by a reduction in dosage. A patient who primarily had a senile tremor with only intermittent "pill-rolling" tremors at rest found no benefit from three months of administration with doses as high as 6.5 gm and discontinued treatment. Another tall, thin, 77-year-old man with orthostatic hypotension elected to try levodopa despite recognizing that the drug aggravated this condition. Even with support hose, abdominal binders and 25 mg tablets of ephedrine sulphate four times a day, he began experiencing signs of brainstem vascular insufficiency serious enough to hospitalize him and discontinue the medication. He was not rehabilitated to an ambulatory status despite vasodilators and several weeks later, he died of an apparent brainstem infarction (no autopsy performed).

A 62-year-old woman with no known cardiac disease developed an increase in her uric acid and SGOT values while taking the drug. While receiving 2 gm of levodopa daily as an outpa-

The results of a study involving 26 patients with parkinsonism who were treated with levodopa between January and December, 1970 are reported by a neurologist in private practice. For the most part, they were treated as outpatients. Seventy-one percent of the patients remaining in the study improved. Two died and two could not tolerate the drug. The author discusses points of interest and differences from larger, experimental studies. Doctor McFarland is Assistant Clinical Professor in Neurology, University of Kansas Medical Center; Consultant in Neurology, Kansas City Veterans Administration Hospital; Instructor of Medicine, University of Missouri School of Medicine-Kansas City and Children's Mercy Hospital; and Associate in Neurology, St. Luke's Hospital, Missouri Crippled Children's Service, University of Missouri-Columbia.

tient, she suddenly developed chest pain and was taken to an emergency room. Her electrocardiogram showed an ideo-ventricular rhythm with large bizarre ventricular (QRS) complexes and then asystole. She died of an acute myocardial infarction (autopsy performed).

A 63-year-old woman developed tachycardia, tremulousness and some light-headedness while receiving 3 gm to 3.5 gm of levodopa, and her EKG showed ischemic changes (Table 2). Her enzymes remained stable and she was followed by an internal medicine specialist, while treatment continued. The cardiogram has now reverted to normal. She continues taking 3.5 gm levodopa daily, but is receiving a buffered nicotinic acid preparation, a low animal fat diet and an exercise program. Another patient showed elevation of numerous values in the SMA-12,

TABLE 1
LEVODOPA INVESTIGATIONAL STUDY

		%
Number of patients entered study	26	
Number of patients continuing study	20	77
Number of patients discontinued study	6	23
Number of patients dead	2	7
Reasons for discontinuance:		
Drug intolerance (nausea and vomiting)	2	
No clinic improvement (tremor)	1	
Psychosis (disorientation and hallucination)	1	
Orthostatic hypotension (subsequently died of brainstem infarct)	1	
Death (myocardial infarction)	1	

TABLE 2
LEVODOPA INVESTIGATIONAL STUDY

Laboratory changes of patients while receiving levodopa	
None	17
Laboratory incomplete	4
Increase in uric acid and SGOT	1
Increase in glucose, alkaline phosphatase and LDH	1
Increase in BUN	1
Increase in PBI	1
EKG (ischemic changes and tachycardia)	1
Total patients	26

TABLE 3
LEVODOPA INVESTIGATIONAL STUDY

Dominant side effects while receiving levodopa (Several patients had more than one)	
Nausea (and/or vomiting)	15
Facial tic	4
None	3
Disorientation	3
Depression	2
Orthostatic hypotension	2
Headache	1
Leg cramps	1
Somnolence	1
Tremulousness	1

including the LDH, alkaline phosphatase and glucose. Persistently increased levels of the BUN and PBI were recognized in two separate individuals.

Twenty-two of the 26 patients entering the study satisfactorily completed their laboratory examinations. All abnormal tests were repeated. Several of the patients had abnormal values before taking levodopa and these did not change. A few had values reported as elevated after taking levodopa, but on retesting, they were found not to have changed. Only those patients whose laboratory tests became abnormal after taking levodopa and were confirmed are listed in Table 2.

The side effect of nausea or vomiting or both occurred in nearly every patient pushed to tolerance with this drug. Only three patients experienced no side effects and they had been on the drug three or less months (Table 3). Perhaps due to the lower average dosage or the short length of the study, dyskinesias were not prevalent. When recognized, they have been exclusively face or lingual movements. As in other studies, orthostatic hypotension, organic brain syndrome and psychiatric changes were noted as dominant side effects.²⁻⁴ The other distressing symptoms reported were rather general: headache, somnolence, tremulousness and leg cramps. A colleague of mine, however, has noted leg cramps in more than one of his patients receiving levodopa.

The percentage of patients showing improvement in each of the three categories graded was fairly constant (Table 4). When the two patients who could not tolerate the drug and the eight patients who were unrestricted in walking and, hence, unable to show improvement in mobility were excluded, seven of the 16 patients showed increased mobility (44%). Forty-five percent

TABLE 4
LEVODOPA INVESTIGATIONAL STUDY

Degree of Improvement	Number Patients Improved	Number Patients Evaluated	%
Mobility	7	16	44
Strength and skills	12	22	55
Neurologic exam	10	22	45
No improvement (in mobility, skills or neurologic)	7	24*	29
Slight improvement (in 1: mobility, skills or neurologic)	17	24*	71
Good improvement (in 2 or 3: Mobility, skills or neurologic)	9	24*	38
A significant improvement, patient's evaluation	18	24*	75*

* Two patients who could not tolerate the drug are excluded.

showed improvement in their neurologic examination and 55% in their strength and ability to do rapid successive movements with their hands or feet. The latter value probably was influenced upward due to learning.

Considering the 24 patients who tolerated the drug, seven showed no improvement in any of the three categories, 17 showed improvement in one of the categories and nine showed improvement in two or more of the graded tests. When the patient was asked if he had appreciated a significant improvement, 18 answered affirmatively. Improved mobility in 12 was noted by ease of getting in and out of a bathtub, automobile or low chair or simply speed and ease of moving about. More intelligible speech was noted in four. Six patients experienced diminution or cessation of tremor. All six had been taking levodopa five or more months. One patient lost his depressed feeling and became happier and more enthusiastic about life. None expressed an increase in libido.

DISCUSSION

Although large levodopa treatment studies have been published, they consist of experimental programs from institutions.⁵⁻⁸ Ultimately, this drug will be administered to outpatients by the physician in private practice, as in this study. Several points of difference or interest in these patients, mostly aging from 60 to 80 years, and many with evidence of cerebrovascular arteriosclerosis, are summarized, as follows:

(1) Despite careful 500 mg increments, in

nearly every case nausea and vomiting will limit the dose of levodopa between 2 gm and 5 gm daily (in sensitive individuals slightly better results are encountered using 250 mg increments).

(2) Cyclizine (Marezine, 50 mg) or meclizine (Bonine, 25 mg) four times a day, bland diet, antacids and postprandial treatment may or may not help the patient tolerate the drug (generally the capsule is easier to swallow and tolerate than the tablet, but the tablet is more flexible).⁹

(3) Psychosis and other psychiatric manifestations are common during treatment and may clear with dose reduction or force discontinuance of the drug.

(4) Within the first year of treatment at these lower doses, dyskinesias are rare and when they occur, are mild and usually involve the face or tongue.

(5) Leg cramps may be related to treatment and may respond to vasodilator drugs.

(6) Orthostatic hypotension is a contraindication to levodopa administration. When it occurs during treatment and is not corrected by the usual management or reduction in dose of drug, levodopa should be discontinued.

(7) Frequent cardiovascular evaluations and EKG's are imperative. Cardiac arrhythmias must be corrected and myocardial infarction may prove to be a risk of treatment.¹⁰

(8) As with alterations in the EKG, elevations in the SGOT, LDH, alkaline phosphatase and uric acid should be followed carefully.

(9) Approximately 50% showed objective improvement in mobility, strength and skills or the neurologic examination.

(10) Mild objective improvement occurred in 71%; 29% had no improvement.

(11) There was general agreement between mild objective improvement and the patient's own evaluation of a significant improvement, and with the percentage improved in other studies.^{8, 10, 11}

(12) Of the 14 patients taking levodopa five or more months, nine had a significant improvement in mobility, six in tremor and four in speech.

As in other studies, rigidity and akinesia improved before tremor but not necessarily more significantly.¹²

(13) Neither the patient's age, length or severity of disease nor maintenance dose of levodopa correlated with significant improvement.

(14) Older patients tolerate less rapid increments and a lower maintenance dose of levodopa.

(15) Outpatient initiation and continuation therapy was practical and safe for the majority of patients.

CONCLUSION

The results of a study involving 26 patients with parkinsonism treated with levodopa between January and December, 1970 are reported by a neurologist in private practice. For the most part, they were treated as outpatients. Seventy-one of the patients remaining in the study improved. There were two deaths and two who could not tolerate the drug. Points of interest and differences from larger, clinical studies are discussed.

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The National Tuberculosis and Respiratory Disease Association offers grants in support of clinical, laboratory, epidemiologic and social research in the fields of tuberculosis and other acute and chronic respiratory diseases. Applications from young investigators are encouraged. Applications for the grant year beginning July 1, 1972 must be received by Dec. 1, 1971. Full information and application forms may be obtained from National Tuberculosis and Respiratory Disease Association, Medical Director, 1740 Broadway, New York, N. Y. 10019.

Delayed Reconstruction for Postradiation Defect of the Middle Ear

Case Report

RADIATION THERAPY has been used as an adjunct to surgical procedures in many instances in treating advanced cancer. Radiation frequently has been used to treat recurrence following surgery. Newer techniques of radiation therapy in the past decade minimize the complication of tissue damage.¹ However, necrosis of the local tissue, such as skin, cartilage and bone may still take place. Rubin and Casarrett² indicate that the principal factors in radiation damage to mature bone or cartilage result in vascular impairment of the vasculature supplying structures, resulting in degeneration and loss of dependent cells. In mature bone, damage to the intraosseous vasculature and to the canals^{3, 4} and canaliculi result in secondary loss of osteocytes and damage⁵ to the periosteal vessels destroys osteoblasts. Cartilage, which does not contain fine vasculature, is regenerated by fibroblasts from the surrounding perichondrium or connective tissue; the radiation damage to the surrounding fine vasculature and connective tissue results in perichondritis.

Longacre,⁶ Masters *et al*,⁷ and Robinson *et al*⁸ reviewed the causes of radiation injury to the different living tissues and reported cases of osteoradionecrosis which were treated surgically. When cancer is not completely removed and radiation therapy is given postoperatively, occasionally we are confronted with an open wound that fails to heal, exposing bone, vital structures, blood vessels or nerves. The presence of radionecrosis may cause pain, infection, drainage or hemorrhage. The treatment of radiation

necrosis is excision and resurfacing with skin flaps. The split thickness skin graft for resurfacing the defect after irradiation tissue is excised is often found not to take. Robinson *et al*⁹ report a loss of about 50% of these grafts.

The Crane principle proposed by Millard¹⁰ should be applied. Hanna *et al*⁵ emphasized the immediate flap reconstruction after conservative temporal bone resection for advanced cancerous lesions of the middle ear or mastoid area. Hanna *et al*⁵ also reported a 42% five-year survival rate of 12 cases of cancer of the middle part of the ear or mastoid area treated with conservative partial resection of temporal bone and immediate flap reconstruction. This was supported by Coleman^{11, 12, 13} and Gaisford.¹⁴ The question of residual cancer, the presence of infection, drainage or bleeding may delay reconstruction.

CASE REPORT

A 57-year-old white man was seen because of having otorrhea for 40 years. He had a subtotal temporal bone resection for well-differentiated epidermoid carcinoma of the left middle ear with extension of tumor medially along the petrous ridge. The pathology study reported deep margin showing incomplete excision of the tumor. The defect in the center of the remaining auricle was packed with vaseline-impregnated gauze. A radium mold treatment was given to the postoperative wound. Subsequently, a tarsorrhaphy was performed for left facial paralysis. The patient had been experiencing headache, pain of the left ear and persistent bloody discharge from the left ear since the operation and was admitted to John Cochran Veteran's Administration Hospital five months after the operation.

Physical examination revealed an ulcerative defect of the left middle ear measuring 3 cm in diameter. There was a yellowish bare bone defect filled with granulation tissue. The skin of the external ear was erythematous and superficially necrotic (Figs. 1 & 2). There was evidence of left facial palsy. Intensive work-up, including brain scan and polytomography of the left ear, revealed no evidence of tumor or destruction. There were several episodes of active bleeding from the defect which was controlled by absorbent gelatin sponge USP (Gelfoam, Manufac-

A case report of radiation-osteochondro-necrosis of the ear treated by surgery for epidermoid carcinoma of the left middle ear. A 16-month follow-up since treatment is without evidence of recurrence of the cancer. The authors are in the private practice of surgery.



Fig. 1 Necrosis of skin of the ear with exposure of necrotic bone of the skull, following radiation treatment for malignancy.



Fig. 2 Higher magnification, showing exposure of necrotic bone of the skull.



Fig. 3 Outline of margin of excision of the ear and scalp, including necrotic bone of the skull.



Fig. 4 Outline of the scalp flap to be elevated and rotated for skin coverage of bone and to be used in ear reconstruction.

tured by The Upjohn Co.) and pressure dressing. The hemorrhage resulted in a hypotension state, lowering hematocrit and required treatment by blood transfusions.

Nine weeks after admission, the lesion was excised with partial amputation of the left ear and a reconstruction was made with a scalp flap split thickness skin graft (Figs. 3, 4 & 5). The patient had an uneventful postoperative course except for a small amount of serosanguinous drainage under the inferior portion of the flap which gradually cleared up spontaneously (Fig. 6). The pathology

report stated that tissue from left ear showed cartilage necrosis and granulation tissue. There was no evidence of persisting tumor. The patient was seen on follow-up last December, 1970 and was doing well without pain or headache and had no evidence without evidence of recurrence of this cancer.

SUMMARY

A case of radiation osteochondronecrosis of the ear treated by surgery for epidermoid carcinoma of the left middle ear is reported. There

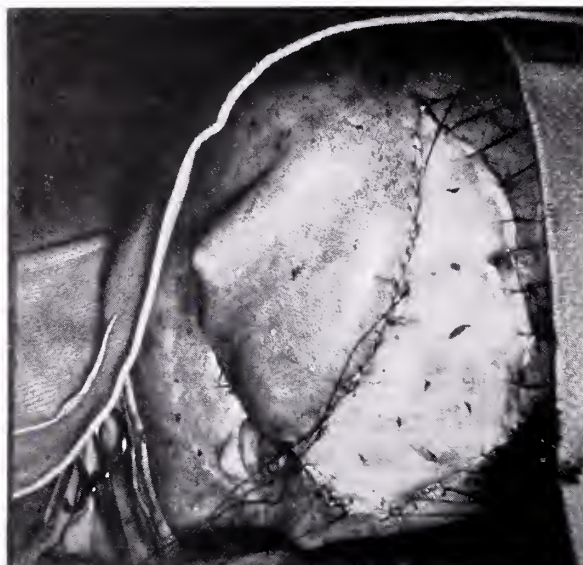


Fig. 5 Flap transfer with split thickness skin graft applied to the donor area.



Fig. 6 Healed wound three weeks following procedure.

has been a 16-month follow-up since treatment without evidence of recurrence of the cancer.

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The 13th National Conference on the Medical Aspects of Sports, sponsored by the American Medical Association under the auspices of its Committee on the Medical Aspects of Sports, will be held in New Orleans, La., at the Jung Hotel on Nov. 28, 1971. The Conference is held annually in conjunction with and on the first day of the Clinical Convention of the American Medical Association.

As in the previous 12 Conferences, the 13th will cover a wide range of subjects of interest to those serving school and college athletic programs. Included will be forums and discussion sections relating to drugs in sports, protection of the lower extremities, electrolyte and thermal balance, innovations in sports medicine through state medical societies, team physician relationships, crucial health perspectives and a medical focus on athletics. Also, demonstrations will be staged on taping, equipment fitting, vision, emergency resuscitation and pre-participation examinations.

The Conference is open to key nonmedical athletic personnel as well as interested physicians. For further information concerning the Conference, address the Committee on the Medical Aspects of Sports, American Medical Association, 535 North Dearborn St., Chicago, Ill. 60610.

'Doppler': A Diagnostic and Operative Adjunct for Arteriovenous Malformation

Case Report

THE ARTERIOVENOUS FISTULA is a direct communication between an artery and vein through which blood bypasses the capillary circulation. Multitudes of these communications are located throughout the body and have a normal function in the microcirculation. When by size, location and hemodynamic alteration these fistula become pathologic in nature, it is sometimes necessary to surgically intervene and remove the pathologic lesion. Arteriography is used in many cases to delineate the lesion. Some lesions, however, are not amenable to arteriography because of location. In those lesions in which arteriography may be used for delineation, the operator receives information concerning only two dimensions of the lesion and must blindly explore for the third dimension, depth of lesion.

Surgical treatment of congenital arteriovenous malformations is complicated by the fact that these lesions usually are not well delineated and at operation, the surgeon will find hemangiomatous tissue infiltration in surrounding areas, which, if not completely excised, may well result in recurrence of the lesion. A very low success rate has been reported for success of lesion removal at operation.¹

In 1961, an ultrasonic flowmeter, which utilized the Doppler effect, was described by Franklin *et al*² as a means of determining blood-flow in animals. Since that time, the Doppler ultrasonic flowmeter has been used to atraumatically and transcutaneously evaluate the extent of peripheral vascular disease in atherosclerosis.^{3, 4} Keitzer *et al*⁵ have reported on the intraoperative use of the Doppler with a sterile probe during vascular reconstruction thus allowing the surgeon to detect hemodynamic alterations in flow which may interfere with vascular patency. Bingham and Lichti^{6, 7} have utilized the Doppler instrument in the delineation of congenital arteriovenous malformations of the extremities and for the evaluation of congenital hemangioma.

The Doppler instrument is an ultrasonic device which consists of an oscillator, a probe (with two piezoelectric crystals of matched oscillatory characteristics), a receiver (which differentiates between incoming and outgoing signals), an amplifier and provisions for audio or video presentation of the incoming and outgoing signal difference. The signal noted is the frequency difference between the incoming and outgoing signals and is known as the Doppler shift. The Doppler shift of frequency has a direct correlation to velocity of flow in the vessel or vessels under surveillance. The use of the Doppler instrument is without associated morbidity or mortality.

Sounds heard during the examination of a single arteriovenous fistula with the Doppler instrument consist of a normal pulsatile sound at the proximal end of the fistula followed by a high pitched, machinery-like sound at the point of arteriovenous contact. Distally, the artery may have fairly normal pulsatile sounds, but usually without the crispness of sound noted in the proximal segment. In a multiple arteriovenous malformation (cirroid aneurysm), there may be more than one artery of primary involve-

This case report illustrates the use of the Doppler ultrasonic flowmeter as an invaluable aid in the diagnosis and follow-up of many vascular disorders. Since the instrument enables the surgeon to better determine and isolate the malformations of the minute vessels with which he is working and provides assurance that a lesion has been removed, it enhances saving of time and money to both the patient and the hospital. Doctor Keitzer is an Associate Professor and Doctor Lichti is an Assistant Professor in the Department of Surgery, University of Missouri School of Medicine.

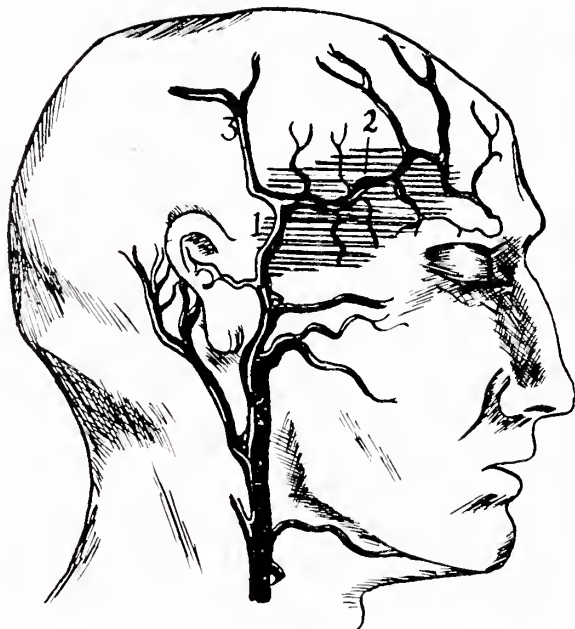


Fig. 1 Locations of arteriovenous malformation as outlined by Doppler examination are (1) middle temporal artery, (2) frontal branch of temporal artery, (3) Temporal branch.

ment. The mass of the malformation, upon Doppler examination, is pulsatile and well interspaced with the sounds of venous runoff. Large artery involvement in the malformation is verified by denoting the artery or arteries entering the area of the lesion. Total lesion delineation is made by scanning the periphery of the lesion with the Doppler probe and noting the cessation of abnormal vascular activity.

In this report, we present the use of the Doppler instrument preoperatively to locate and delineate the multiple arteriovenous malformation, to identify the large arteries involved in the lesion and to ascertain venous involvement. Operatively, the Doppler, with sterile probe, is used to assure the surgeon that all abnormal vasculature has been excised or obliterated by ligation. Postoperatively, it is used in clinic to verify, at periodic visits, that there is no recurrence of the malformation.

CASE REPORT

A 21-year-old white woman who complained of soreness and a mass in the right temporal region was seen in surgery clinic. The soreness had been of two-weeks duration and was attributed by the patient, who worked as a telephone operator, to the positioning of her headphones in the temporal region during working hours. Physical examination confirmed a mass with a pulsatile thrill in the region.



Fig. 2 Arteriographic delineation of arteriovenous malformation.

Extensive transcutaneous Doppler evaluation of the area was made and the interpretation of the sounds in the right temporal region were as follows:

(a) A pulsating mass just forward and above the right ear contained sounds indicative of a multiple arteriovenous fistula.

(b) Three larger vessels (arterial) were primarily involved in the activity in the region of the cirroid aneurysm.

(c) Arterial supply posterior to the right ear was not involved in the malformation (Fig. 1).

Radiological evaluation of the region revealed a relatively large superficial temporal artery with an opacification of a relatively large vessel in the temporal region. There also was evidence of early shunting into the venous structures in the area (Fig. 2). After all of the data was compiled, a tentative diagnosis of arteriovenous malformation (cirroid aneurysm) in the right temporal artery was made.

On Jan. 27, 1969, an operation was performed on the patient and the right temporal area was explored. The temporal artery was identified and, with the vein, was ligated and excised. A mass of tortuous vessels was isolated superficial to the temporal fascia. The area was then examined with the sterile Doppler probe to confirm what was thought to be a complete excision of the lesion. A considerable amount of abnormal vascular activity was noted beneath the temporal fascia and dissection of the area revealed an extensive mass of tortuous vessels beneath the fascia. This had not been evident by palpation or inspection.

After excision of these vessels, the Doppler probe was again used to inspect the area. The only detection of flow in the area was noted beneath the skull in the middle meningeal artery. After ascertaining that all traces of the malformation had been removed, the area was closed and the patient's postoperative course was uneventful.

The patient has been followed in surgery clinic for a period of more than two years. Neither physical nor Doppler examination has shown a recurrence of the lesion.

DISCUSSION

We have presented the case report of a 21-year-old woman with a temporal artery arteriovenous malformation (cirroid aneurysm). To determine the extent of the lesion and to delineate the vasculature involved in and surrounding the lesion, extensive use of the Doppler ultrasonic flowmeter was made. The knowledge that the blood supply posterior to the ear was not involved in the malformation was, indeed, valuable to the surgeon. Use of the instrument intraoperatively enabled the surgeon to ascertain that he had removed all vestigial traces of the malformation. This instrument supplies the surgeon with an audible, dynamic perspective of the multiplicity of small vessels involved in the malformation. We have found it to be a great adjuvant in surgery for arteriovenous malformations.

Tape recordings of the sounds preoperatively, postoperatively and during clinic visits are an excellent teaching or learning aid.

CONCLUSIONS

The Doppler ultrasonic flowmeter,* as an aid in the diagnosis of many vascular disorders, is

an invaluable tool. Use of the instrument with a gas sterilized probe during a surgical procedure enables the surgeon to better determine and isolate the malformations of the minute vessels with which he is working. Clinical follow-up with the instrument gives reassurance to both the surgeon and the patient that all vestiges of the lesion have been removed. The Doppler instrument is lightweight, portable, relatively inexpensive, readily available and well accepted by the patient since it causes no physical or mental discomfort. The use of this device will enhance the saving of time and money to both the patient and the hospital.

* The Doppler ultrasonic flowmeter used is manufactured and distributed by Parks Electronic Laboratories, Beaverton, Ore.

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A *Symposium on Stroke Diagnosis and Treatment* will be presented on Nov. 5, 1971 by the Bi-State Regional Medical Program, Diagnostic-Demonstration Stroke Unit and the St. Louis Chapter, American Heart Association at Glennon Hall, St. Louis University School of Medicine, 1401 S. Grand Blvd. in St. Louis. The program, which has been approved for five hours credit by the AAGP, will begin at 2 PM and conclude at 6:30 PM. MSMA members are invited to attend.

The Diagnostic Demonstration Unit for Stroke will be open to all who are interested at 9 AM on November 6. Physicians are requested to meet in the lobby of the Desloge Hospital, 1325 S. Grand Blvd., for a tour of the facilities.

Special X-ray Exhibit

SIDNEY RUBIN, M.D., RODGER LAMBIE, M.D. and
EDWIN HERMAN, M.D., *Kansas City**

Radiologic Problem Case

A 24-YEAR-OLD white woman was admitted to the hospital because of pelvic and low back pains and the presence of a large right pelvic mass. Two years ago, she first experienced an episode of low back pain which radiated into the right lower extremity. The patient was seen by an orthopedic surgeon. Following a myelogram, she underwent a laminectomy and excision of a disc. The symptoms were completely relieved following surgery.

Six months ago, the patient again began experiencing low back pain and dull intermittent pelvic pain. The symptoms began shortly after a normal pregnancy and uneventful delivery. During a postpartum checkup, her gynecologist discovered a large cystic pelvic mass. The mass remained unchanged over several months of followup.

The patient moved to this area and consulted another gynecologist who confirmed the presence of a large, fixed right pelvic mass. It was his opinion that the mass was extragenital and advised hospital admission for further workup.

Past History: Endometriosis was treated by conservative surgery several years ago with no further difficulty. A single, uncomplicated pregnancy terminated normally with a healthy child in July of 1970. Lumbar laminectomy was performed in 1968. There is no past history of skeletal trauma.

Physical Examination: The patient appeared healthy and in no acute distress. HEENT was remarkable. Neck was supple, no adenopathy. Chest was clear to auscultation and percussion. Heart: normal sinus rhythm, no murmurs. Blood Pressure: 124/70. Pulse: 82 beats per minute. Breasts: normal, no palpable masses. Abdomen, liver, kidney and spleen were not enlarged with no palpable masses or tenderness. Skeletal system: the patient stands erect and there is no evidence of list of the trunk. The range of mo-

tion of the lumbosacral spine was within normal limits. The Lasegue maneuver and Patrick's test were negative. There was no evidence of tenderness or masses over the sacroiliac area. Pelvic examination revealed a large, nontender cystic mass arising from the right lateral pelvic wall. The mass is about the size of a baseball and is completely fixed posteriorly and laterally.

Laboratory Data: pH of the urine, 6; specific gravity, 1.025; protein, sugar, and acetone were negative. Occasional red blood cells and a few white blood cells were found microscopically. Hemoglobin, 11.6 gm/100 l; hematocrit, 35%; WBC, 6,800, polys. 67; stabs, 2; eos. 1; lymphs. 25; monocytes 5; sediment rate, 45 mm.

The biochemical survey showed the inorganic phosphorus, glucose, BUN, uric acid, cholesterol, total protein, albumin, total bilirubin, alkaline phosphatase, LDH and SGOT to be within limits of normal.

The serum electrophoresis was entirely within normal limits with no abnormal spikes.

Radiological Studies: The chest was within normal limits. The plain film of the abdomen (Fig. 1) and a lateral view of the sacrum and coccyx (Fig. 2) revealed a cystic tumor involving the right half of the sacrum which extended across the true right sacroiliac joint to involve the ilium. The mass almost completely destroyed the true sacroiliac joint as well as caused a partial upward subluxation of the entire right hemipelvis. The cystic tumefaction was predominantly lytic causing anterior ballooning of the second, third and fourth sacral segments and extended out into the pelvis as a soft tissue mass. Laminographic cuts of the tumor failed to reveal evidence of reactive bone formation and confirmed the extension of the tumor through the cortex into the pelvis (Fig. 3).

An intravenous pyelogram was normal with the exception of slight pressure upon the urinary bladder from a prominent uterine shadow. The ureters were normal in their course and were not displaced by the cystic tumor.

* The authors are from the Department of Radiology, Menorah Medical Center, where Doctor Rubin is Chairman. They were assisted by Frank Mantz, M.D., pathologist. This is the seventh article in this series.



Fig. 1 A.P. coned-down view of the sacrum and pelvis. There is a well defined cystic tumor destroying the right half of the sacrum. The tumor crosses the sacroiliac joint and has caused upward subluxation of the right hemipelvis. There is soft tissue extension of the tumor inferiorly.



Fig. 2 Lateral view of the sacrum showing anterior ballooning of the cortex of the second, third and fourth sacral segments.

A barium enema examination showed the rectum and the sigmoid colon to be displaced to the left and anterior by the mass, but there was no direct involvement of the colon by the tumor.

Differential Diagnosis:

1. Benign giant cell tumor.
2. Benign osteoblastoma.
3. Aneurysmal bone cyst.
4. Chordoma.

The literature often states that the roentgen diagnosis of solitary cystic lesions in long bones is much easier than when flat bones, such as the pelvis and sacrum, are involved. This probably is a misconception and is based on the fact that solitary cystic lesions involve the long bones more frequently than the flat bones. When cystic lesions occur in unusual locations, the diagnosis seems more difficult. If one applies the same criteria in arriving at a diagnosis of solitary cystic lesions of flat bones, as is used in inter-



Fig. 3 Laminographic cut shows the tumor to be fairly well circumscribed with no evidence of new bone formation.

preting long bone cystic lesions, the conclusions are usually valid. Final diagnosis, however, must be based on a biopsy and a roentgenological-pathological correlation.

Chordoma is a rare malignant tumor derived from notochordal remnants. The tumor must always be considered when tumors are found destroying the sacrum and coccyx. It usually occurs in patients over the age of 30 and begins in the midline. The roentgen findings in this patient are entirely compatible with chordoma, however, the age of the patient makes this diagnosis unlikely.

Aneurysmal bone cysts are fairly well circumscribed lesions and, as the name implies, they show a propensity for aneurysmal expansion. There is usually a soft tissue extension of the tumor with the periosteum being pushed ahead of the tumor. Aneurysmal bone cysts are made up of anastomosing cavernous spaces which ordinarily make up the bulk of the lesion and are filled with unclotted blood. Two-thirds of the patients are less than 20 years of age. Long bones are the site of predilection. However, almost any bone in the body may be involved.

Benign osteoblastoma is a very uncommon lesion and only a few small series have been reported in the literature. Osteoblastomas commonly involve the spine, and the neural arches are the usual location. It is an expansile type of

lytic bone lesion that is fairly well circumscribed. At times, fine calcification may be seen about the periphery of the lesion. Reactive bone sclerosis, however, as well as periosteal new bone formation is not seen with osteoblastomas. Certainly osteoblastoma cannot be ruled out in this case. However, the fine peripheral type of calcification commonly seen was not present in this case.

Benign giant cell tumors occur most frequently between the ages of 20 and 25. The distal end of the femur and radius and the proximal end of the humerus are sites of predilection. The pelvis and vertebral bodies are only occasionally involved. Giant cell tumors present themselves as purely osteolytic lesions that are fairly well circumscribed. As they expand, the cortex becomes involved and finally destroyed; and the periosteum is pushed ahead of the tumor. The margins of the tumor usually fade off slowly into the normal appearing bone; there is no attempt at repair and new bone formation is not seen. Trabeculation is sometimes seen within the tumor. The tumors are generally large when discovered in flat bones and cause symptoms usually quite late when the cortex has been completely destroyed and soft tissue extension becomes evident.

Pathological Diagnosis: Benign giant cell tumor of sacrum—Grade 2.

The basic message in a new 16-page booklet for consumers released by the Pharmaceutical Manufacturers Association recently is that there need not be a mystery when a doctor prescribes one of today's modern medicines. Entitled, "When It Comes to Rx Medicines, There Are a Lot of Questions You Should Ask," the colorful, pocket-size booklet examines the methodology of prescribing and some of the long-standing controversies related to it and attempts to place some of the questions in perspective for the average consumer.

Copies of the booklet are available upon request from the Public Relations Division, Pharmaceutical Manufacturers Association, 1155 Fifteenth St., N.W., Washington, D. C. 20005.

Recent Developments in the Treatment of Infectious Diseases

Part V. Management of Tuberculosis in the Community Hospital

THE PAST 20 YEARS have brought about major changes in the approach to the problem of pulmonary tuberculosis. These include improvements in diagnosis, therapy, prevention by the use of both vaccines and sanitation and by better understanding of the epidemiology of the disease. As a result of excellent public health work, the practicing physician in this country is confronted with a disease which is somewhat different from that known to his predecessors. In areas where crowding is still prevalent and medical care somewhat substandard, such as the inner-cities of this country, pulmonary tuberculosis still represents a significant public health problem; however, in the less densely populated areas where nutrition and medical care are more adequate, tuberculosis has undergone a change in its clinical presentation. Although the disease has declined in the world population as a whole, it is still an important cause of morbidity and mortality although the populations affected are somewhat different. This fact is most readily demonstrated by measuring skin test reactivity to tuberculin; the majority of the population under the age of 20 years is now nonreactive. As a result, the physician in the United States is more likely to see primary tuberculosis in the adolescent and young adult population.

Hitherto, this disease was a problem of the pediatrician, while the internist usually treated reactivation tuberculosis in adolescents, young adults and the older age population. Newer antimicrobial agents are appearing and are being employed not only by those who deal primarily with tuberculosis, but also by the physician population generally as more and more tuberculosis is treated outside of the sanatorium. In fact, as our understanding of the pathogenesis and communicability of tuberculosis advances, increasing numbers of patients are being treated in the home or in community hospitals and the need for sanatoria is declining.

A group of agents which is of variable clinical

importance, depending on one's location in the country, is the atypical mycobacteria. In Missouri, *M. kansasii* is not an uncommon pathogen and produces disease which is similar in every respect to typical tuberculosis caused by *M. tuberculosis*. The distinction between these two is important not only therapeutically, but also from the public health standpoint since the disease caused by the former appears not to be transmitted from person to person and isolation precautions are not necessary.

CLINICAL PRESENTATIONS

Early studies, both clinical and experimental, carried out by Rich¹ and the more recent writings of Stead² have made it very clear that pulmonary tuberculosis undergoes the following sequence of events: the causative organism is inhaled, as a rule, from an individual with an active infection. These organisms are in the form of fine droplet nuclei and remain viable for a significant period of time despite desiccation. Contaminated food or drink is rarely dangerous. Most individuals infected with the organism do not develop disease, but only show evidence of altered reactivity to tuberculin; in others, infection results in significant host injury. In this latter group, the disease presents as primary pulmonary tuberculosis. The organisms produce a small initial lesion usually peripherally in the lung in the upper part of the lower lobe or the lower portion of the upper lobe, with an associated involvement of the regional and perihilar lymph nodes. At some time during the spread of the disease from the periphery of the lung toward the hilum, hematogenous dissemination may occur, seeding the body with tubercle bacilli. Virtually all of these metastatic foci are eradicated by the now hypersensitive host defense mechanisms. Generally, the primary pulmonary lesion is contained by the bodily defenses although if clinical disease does occur, intensive chemotherapy can lead to eradication.

The more usual picture, however, is suppression or containment of the disease and calcification of the involved lymph nodes to produce the classical Ghon complex. The subsequent quiescent stage may last for the lifetime of the infected individual or the disease may go on to reactivate at a later time. The periods of peak reactivation are during the adolescent years, if the individual has been infected as a child, or in the late adult years during the sixth and seventh decades.

Although tuberculosis in adolescence has declined in recent years, concurrent with the decrease in tuberculosis worldwide, it remains an important cause of death in this age group and poses special problems in diagnosis and treatment. Initial infection with the tubercle bacillus has become relatively more frequent in adolescents and young adults as the prevalence of tuberculosis has declined.³ This phenomenon is especially noticed in economically-privileged countries such as our own, where the annual tuberculin conversion rate rises rapidly from the age of ten years on, concomitant with the period of more numerous social contacts outside the home. Many of these contacts are casual: Lloyd and McPherson found that 60% of adolescents with primary infection were unaware of the source of their infection.⁴ In a more recent study of soldiers 17 to 20 years of age, Boyd noted that those with primary tuberculosis had a story of numerous possible contacts from the age of 16 on; in contrast, those with chronic pulmonary disease of the adult type usually showed a heavier family background of tuberculosis and known exposure to infection about four years earlier than the group with primary tuberculosis.⁵

It is evident from the foregoing that the tuberculin skin test, long a useful tool for identifying the tuberculous infected in a population, is now of even more value. A positive reaction to mycobacterial purified protein derivative (PPD) in an adolescent or young adult may be taken as evidence for relatively recent infection, even in the absence of other clinical findings, and should be treated appropriately (see below). However, in this area the prevalence of infection with *M. kansasii* may complicate the interpretation of a positive skin test. A reaction to PPD with greater than 10 mm induration at 48 hours is taken as evidence for infection with *M. tuberculosis*. Reactions of less than 5 mm induration at 48 hours are interpreted as a negative response. An area of induration less than 10 mm and greater than 5 mm in diameter at 48 hours

is indeterminate and may be a result of cross reaction with the antigens of *M. kansasii*. In these instances, repeat skin testing using the PPD-Y antigen obtained from *M. kansasii* may be of value. If the response to the latter antigen is greater than that to the PPD-S (*M. tuberculosis*) then skin test reactivity is most likely due to infection with atypical microbacteria. It is not necessary to treat persons with a positive skin test for *M. kansasii* unless there is corroborating clinical evidence of disease in the form of an infiltrate visible on a chest roentgenogram, cough, sputum production, isolation of the organisms from a patient sputum, etc.

Pulmonary disease due to infection with *M. kansasii* is usually slowly progressive and uncomplicated by the recovery of other pathogenic agents. However, chronic obstructive pulmonary disease frequently is observed in patients with these infections, raising the question as to the role of nonspecific pulmonary pathology in favoring the retention and tissue invasion of an organism of borderline or diminished virulence. Of all the atypical mycobacteria, *M. kansasii* is most likely to show a favorable response to intensive antituberculosis chemotherapy. This is borne out in drug susceptibility patterns which reveal definite inhibition at higher concentrations of isoniazid (INH) and, to a lesser extent, streptomycin and para-amino-salicylic acid.⁶ No clear-cut instance of case-to-case or human transmission of *M. kansasii* infection has been reported; therefore, it has been recommended that such patients should not be subjected to the usual legal restrictions imposed on those with tuberculosis. Nevertheless, final judgement on the epidemiology of these infections must remain suspended due to the inadequacy of our current knowledge.

CHEMOTHERAPY OF TUBERCULOSIS

The initial treatment for tuberculosis in the majority of cases should include a period of hospitalization. This provides an opportunity to obtain essential baseline information pertinent to each patient and to permit the repetition of such procedures as sputum and gastric cultures; liver function tests, roentgenographic procedures, which may include tomograms and bronchography; and pulmonary function tests, if indicated. Another essential part of the initial hospitalization is the opportunity which it provides to teach the patient about the transmission of tuberculosis and firmly convince him of the importance of covering the nose and mouth when coughing or sneezing and to convey to

him that cure of this disease will almost certainly be achieved. This facet of care of the tuberculosis patient is many times overlooked and may be a common cause for therapeutic failure. If the patient does not clearly understand the chronicity of the disease process and the necessity for taking drugs for a long period of chemotherapy, it is unreasonable for the physician to assume that the patient will continue to take medicines for the many months that are required for adequate chemotherapy. The duration of initial hospitalization will require an individual judgement for each patient. In general, once a drug regimen has been found to be effective and consistently negative sputum cultures have been confirmed, discharge from the hospital is in order. Such factors as home conditions, presence or absence of young children, anticipated reliability of continuing chemotherapy and the general clinical status of the patient then become dominant in determining the final decision regarding discharge. In patients for whom reliable follow-up is assured and in whom disease is only minimal to begin with, the initial period of hospitalization will be very short and the major portion of the chemotherapy can be carried out at home. Treatment at home necessarily demands that the physician be alert to the public health consequences and the necessity for repeated skin testing or even prophylaxis of other persons living at home (see below).

The total extent and location of pulmonary tuberculosis is decided from examination of the chest roentgenogram. Although several views of the chest would be ideal for the establishment of the distribution and character of the disease, a single posteroanterior film may be sufficient.

Pulmonary tuberculosis may be conveniently classified, as follows:

1. *Minimal*. Minimal lesions include those that are of slight-to-moderate density but do not contain demonstrable cavitation. They may involve one or both lungs, but the total extent should not exceed the volume of lung which is present on one side above the second chondrosternal junction and the spine of the fourth cervical vertebra. This classification also is applied to lesions that cannot be seen on the roentgenogram but which are associated with the confirmed finding by culture of tubercle bacilli.

2. *Moderately advanced*. These lesions may be present in one or both lungs, and disseminated lesions of slight to moderate density may extend throughout the total volume of one lung or the equivalent in both lungs; total diameter of cavitation, if present, must be less than 4 cm.

Special Series

The fifth article in this series provides detailed information regarding the management of tuberculosis in office practice and in the community hospital.

The next article in this series will deal with the increasing incidence of venereal diseases, current recommendations regarding therapy and a discussion of a recently-introduced antibiotic to be used in the treatment of gonorrhea.

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3. *Far advanced*—This term is used to describe lesions that are more extensive than those described above.⁷

Currently, there is little need to utilize drugs other than streptomycin, isoniazid (INH) or ethambutol for the treatment of patients who have had no prior chemotherapy. Cavitory disease, whether far advanced or moderately advanced, should be treated with a triple regimen. Minimal or moderately advanced noncavitory tuberculosis may be effectively treated with various double drug regimens such as streptomycin-INH or INH-ethambutol. If there is any question regarding the extent of the disease, the safer regimen of triple therapy should be applied. Virtually all tuberculosis seen in the community can be assumed to be caused by organisms which are sensitive to the above three drugs. If sputum or gastric cultures yield *M. kansasii*, then it may be necessary to obtain sensitivity determinations of the organism from the public health service since this atypical mycobacterium is sometimes partially resistant to isoniazid.

Isoniazid. Isoniazid (INH) is very close to being an ideal drug for the treatment of tuberculosis. It is the least toxic of all available drugs, the most efficacious and the least expensive. The most effective daily dosage of INH with the minimum number of side effects is 8 mg/kg body weight per day. This dosage was determined by studies on the reversion of tuberculin reactivity to nonreactivity in recently infected individuals using varying amounts of INH. In addition, 8 mg/kg/day nullifies the

rapid rate of acetylation of this drug which is genetically determined and may be a problem at the lower dosage of 5 mg/kg/day.

INH may be given in the traditional one third total dose three times a day, but the highest serum levels are obtained by two divided doses or a single oral dose. On a regimen of 8 mg/kg/day, most persons will require about 600 mg of the drug; this amount is probably best administered in two divided doses about four to six hours apart.

There have been several recent reports on INH-induced liver disease. The Center for Disease Control in Atlanta, Ga. appointed an advisory committee to study this topic, and its report was published in July, 1971.⁸ The conclusions are as follows: liver disease can occur in patients receiving isoniazid although the risks of developing this complication are very small, varying from 0-10 cases/1000 patients on isoniazid per year; the development of the disease is not predictable in any individual; INH-associated liver disease does not appear to occur in children. There were several areas of discussion in which general conclusions could not be developed; these included the degree of reversibility of the liver damage and the pathophysiology of INH-associated liver disease. The disease is placed in the category of "nonpredictable, drug-induced hepatitis resembling viral hepatitis." It does not seem to be dose dependent nor are there any identifiable predisposing factors. The possibility remains that impurities in the drug may be the actual cause of the disease. The committee did make several specific recommendations. These are that screening procedures prior to the administration of INH should include investigation for the following:

1. History of prior reception of INH to exclude those who have had an adequate course of the drug.

2. History of adverse reaction to INH.

3. History of consuming other long-term medication such as diphenylhydantoin, meprobamate, hormones.

4. History of symptoms or signs consistent with acute liver disease.

Because isoniazid-associated liver disease is viewed as an unpredictable hypersensitivity response, the committee felt that a history of past chronic liver disease (not associated with isoniazid) was not necessarily a contraindication to initiation of isoniazid preventive therapy. Routine monitoring for liver disease by laboratory tests was not recommended since it was felt by the committee that these were not needed un-

less symptoms or signs of liver disease became evident.

As with any drug, priorities must be considered in placing patients on preventive therapy. These priorities do not apply to individuals known to have tuberculosis; persons with known disease should be treated with isoniazid unless one of the above contraindications is present. The following groups should receive consideration for the prophylactic administration of isoniazid. They are listed in order of decreasing importance, as follows:

1. Household and other close associates of active cases of tuberculosis, both tuberculin negative (especially children) and tuberculin positive.
2. Recent converters of any age. This may be defined as a change from negative reaction to a positive reaction or an increase in a positive reaction of 6 mm or more.
3. Tuberculin positive individuals with pulmonary lesions of unknown etiology, compatible with tuberculosis but not sufficiently stable to be classified as inactive tuberculosis.
4. Persons with inactive tuberculosis or residual fibrotic pulmonary disease presumed to have been tuberculous in origin.
5. Individuals with a positive tuberculin reaction who have medical conditions such as leukemias, reticuloendothelial disease or gastrectomy or are receiving immunosuppressive drugs.
6. Positive tuberculin reactors under the age of 20.
7. Other identified positive tuberculin reactors.

Streptomycin. Streptomycin may be given as 1 gm intramuscularly daily for two to three months. It then can be discontinued if a good therapeutic response has been observed. If not, the drug may be continued for an additional three to four months at dosage of 1 gm three times a week. Patients who have impaired renal function will require a different dosage schedule (Table 1). Except for occasional instances of hypersensitivity, the major toxic effects of streptomycin are upon the eighth nerve and the kidneys. Vertigo is generally not seen before the sixth or seventh week of therapy and it will diminish when the drug is stopped. Hearing loss is only rarely observed and usually occurs in elderly patients or those with renal disease. Vestibular and renal manifestations of streptomycin toxicity often disappear if the dose is re-

TABLE 1¹
DOSE INTERVALS (hours)

Compound	Creatinine Clearance (ml X min ⁻¹)			
	100	80-50	50-10	10
Streptomycin	12	24	24-72	72-96
Vancomycin	6	24-72	72-240	240
Kanamycin	8	24	24-72	72-96
INH	8	8	12	12-24
Ethambutol	24	24	24 ^a	24 ^a
PAS [†]	8	8	not used	
Rifampin	8	8	8	8

^a At C_{cr} below 50 ml x min⁻¹ use 15 mg/kg/day.[†] At C_{cr} below 50 ml x min⁻¹ GI toxicity is severe and acidosis is worsened.¹ For more specific information regarding the use of this table, see reference #15.

duced to 0.5 gm daily. Hypersensitivity to streptomycin may be manifested as skin rash, fever or malaise. In persons in whom renal failure is a major problem, it is reasonable to omit streptomycin from the therapeutic regimen and substitute in its place pyrazinamide or rifampicin.

Para-aminosalicylic acid (PAS). This is the least potent of the initial therapeutic agents and has the greatest potential to produce hypersensitivity reactions and other toxic manifestations. For these reasons it is gradually being replaced by the somewhat newer agent ethambutol. Nevertheless, it is a valuable drug when used as an adjunct to INH therapy and usually can be maintained in most patients. Gastrointestinal discomfort is the most common side effect; it varies from occasional diarrhea to severe nausea and vomiting with diarrhea. Hypersensitivity reactions are not infrequent and are manifested as fever, skin rashes and, occasionally, a syndrome resembling infectious mononucleosis. The side effects may often be controlled by the use of antispasmodics and sedatives and rarely require the cessation of PAS therapy. Gastrointestinal bleeding is occasionally a problem and persons known to have active peptic ulcer disease or a previous history of such disease should be watched carefully.

Ethambutol. Because of the relative infrequency of unpleasant side effects, hypersensitivity and severe toxicity, ethambutol is gradually replacing PAS as a primary treatment drug.⁹ The recommended dosage is 15 mg-25 mg/kg/day. Some investigators¹⁰ favor using ethambutol at 25 mg/kg for the first 60 days and then reducing the amount to 15 mg/kg daily thereafter. The drug is not used alone but in conjunction with isoniazid or isoniazid-streptomycin in ini-

tial therapy. The only significant toxic effect of the drug is retrobulbar neuritis with reduced visual acuity. The earliest change in visual acuity is a decreased ability to perceive the color green. Therefore, patients receiving ethambutol should be checked periodically for this defect. It is important that each eye be checked separately since unilateral retrobulbar neuritis has been reported. This complication resolves on withdrawal of the drug.

Pyrazinamide (PZA). This is a potent anti-tuberculosis agent and is particularly valuable in multiple drug treatment regimens. The usual dose is 3 gms per day using the following schedule: 1 gm at 8 AM and 12-noon, and 0.5 gm at 10 AM and 4 PM. The need to use this agent in the treatment of tuberculosis as seen in the community will be very rare, and because of its toxic effect, its use probably should be restricted to hospitalized patients. Hepatotoxicity occurs in about 10% of those persons receiving the drug. All patients receiving PZA should be monitored for alterations in liver functions, with serum transaminase (SGOT) determinations at three- to four-week intervals being the most useful.

Rifampin. This is a relatively new antibiotic extremely effective against tubercle bacilli. It has been used in England and Europe for several years, but only recently has been approved in this country. Its principal applicability is in the treatment of pulmonary tuberculosis and it may be combined with isoniazid, ethambutol or streptomycin in initial therapy. Its major use to date has been in the retreatment of patients in whom the development of resistant organisms has prevented successful initial therapy.¹⁰ *M. tuberculosis* is highly susceptible to this drug, all organisms thus far tested having been inhibited by a concentration of 1 mcg/ml, a concentration easily achieved in the blood by the recommended dosage. The drug is usually administered at 600 mg/day as a single dose or in two divided doses. Organisms resistant to isoniazid and other antituberculosis drugs do not demonstrate cross-resistance to rifampin.¹¹ Toxicity is minimal and includes a few instances of thrombocytopenia and alterations in liver function tests. The latter side effects disappear when the drug is discontinued. In a series of 30 patients with far advanced resistant pulmonary tuberculosis treated with this drug, no toxicity attributable to rifampin was noted.¹⁰ Rifampin-resistant tubercle bacilli have been observed, so that this agent should not be used alone.

Since the physician has at his disposal a number of very excellent chemotherapeutic agents

for initial treatment of pulmonary tuberculosis, rifampin probably should be withheld from the primary treatment regimen. Under certain conditions, it will have a place in initial therapy; since it is excreted primarily by the liver, it may be used in persons with renal failure who require treatment for tuberculosis (Table 1) or it may be used in retreatment of individuals who have an infection with organisms known to be resistant to one or more of the other chemotherapeutic agents. Since the emergence of rifampin-resistant tubercle bacilli has been observed, rifampin should always be combined with another antituberculosis drug. An additional difficulty with the use of rifampin is that of cost. At current pricing, rifampin will cost the patient about \$1.00 per capsule or a total cost of \$2.00 a day for this drug alone.

In summary, the available evidence justifies the conclusion that in far advanced or moderately advanced pulmonary tuberculosis, initial therapy should include a triple drug regimen. Streptomycin, isoniazid and ethambutol in combination provide the greatest effective coverage with the lowest toxicity. As mentioned above, streptomycin may be discontinued after 60 to 90 days depending upon the rapidity with which the sputum cultures become negative. If the sputum cultures are persistently positive, this drug may be continued up to 120 days at a reduced dosage. If the sputum cultures do not convert from positive to negative relatively rapidly, sensitivity testing should be done on the isolated organism to be certain that it is sensitive to the drugs being used. After streptomycin is discontinued, double chemotherapy with INH and ethambutol should continue for the remainder of the first year. Therapy should then be continued with isoniazid alone for an additional year making the total duration of therapy two years. The available evidence now indicates that prolongation of a chemotherapeutic regimen to three years is probably no more effective.¹²

TREATMENT OF TUBERCULOSIS IN THE COMMUNITY HOSPITAL

Ever since the demonstration of a bacillus as the cause of tuberculosis, there has existed a fear of the disease as being highly contagious. As a result, a rather elaborate system of precautions has been developed to protect individuals who are in contact with an infected individual from infection. The past two decades have yielded a more precise knowledge of the mechanisms of transmission and practical ways of disinfecting air; however, attitudes toward con-

tagion and practices of handling of tuberculosis patients have not kept pace.

The tubercle bacillus is an organism that is readily killed by heat, drying, sunshine or other sources of ultraviolet light. It is transmitted from person to person in droplet nuclei produced during coughing or sneezing by the infected patient. When air is exhaled from the lungs of the infected patient, small droplets of sputum are expelled as well. The larger particles fall to the ground very near the person who is coughing, the smaller ones evaporate rapidly leaving behind "droplet nuclei." Larger particles, even if inhaled by someone close to the patient, will be stopped in the nasal and upper respiratory passages and eliminated even though they may be laden with tubercle bacilli. Only the small droplet nuclei, individual tubercle bacilli, can pass through the air passages to the terminal bronchioles and alveoli where they settle out, survive and multiply as infection becomes established. Thus, the available evidence suggests that tubercle bacilli on fomites—bed linen, furniture, floors, utensils—do not constitute a significant infection hazard. Most of these organisms die quickly as a result of drying, heat or sunlight and the simple measure of hand washing is efficacious in removing organisms which may have been acquired by contact.

Therefore, breaking the chain of transmission of tubercle bacilli from person to person has two aspects; first, prevention of contamination of the air and, second, elimination of contamination once it has occurred.

Prevention of Contamination

Chemotherapy. The initial drug regimens outlined above ordinarily will reduce the cough and sputum of tuberculosis patients within a matter of days and generally within a few weeks the excretion of viable tubercle bacilli is halted. Thus, the most effective measure for prevention of contamination is a good initial chemotherapeutic regimen. Occasionally, a patient with drug-resistant organisms will constitute a special problem by continuing to excrete viable tubercle bacilli; however, this will not usually be a problem in the community hospital.

Covering of Nose and Mouth. This is a precaution which should be taken by the patient whenever coughing, sneezing, laughing, raising sputum, etc. It is extremely effective in preventing aerosolized secretions from becoming airborne and the transmission chain is broken at its source. All raised sputum is expectorated in-

to disposable tissues, placed in special containers and burned or flushed into a sewage system.

Elimination of Contamination

Decontamination. The aim of decontamination is to remove from the air any tubercle bacilli excreted by the patient. These procedures should be applied to places where unknown or unsuspected tuberculosis may be present, since it is these individuals who are most likely to transmit the disease. Because of the precautions taken in the care of persons with known tuberculosis, these individuals rarely transmit the disease. Thus, emergency and admitting rooms of general hospitals and clinics and rooms used by patients until their chemotherapy has become effective are sites in which decontamination procedures should be followed.

Ventilation. The concentration of organisms in the air of a room and, therefore, the likelihood of inhaling them is substantially reduced if the room is well ventilated. The simplest and most effective means for doing this is by opening windows or by the use of a small exhaust fan to pull air from the room to the outside.

Ultraviolet Light. The use of ultraviolet light is an additional, very valuable procedure for disinfection. Many studies have shown that the air of tuberculosis patients' rooms can be rapidly made noninfectious by irradiation. While the use of ultraviolet light is recommended for the rooms mentioned above, most hospitals and clinics will be understandably reluctant to install them. However, one or two rooms in any community hospital could be utilized for the care of tuberculosis patients by the placement of exhaust fans in a window and the installation of several ultraviolet bulbs mounted on the walls about 6 to 8 feet above the floor so that *only* the upper half of the room is irradiated. As the air recirculates in the room, most of the tubercle bacilli will be destroyed.

Gowns and Masks. Although gowns and masks have been traditional means of preventing the spread of tuberculosis to hospital personnel, they

are completely ineffective in preventing airborne infections and are not necessary. If anyone is to be masked, it should be the patient, and this is indicated only if he is unable or unwilling to cover his mouth when coughing.

The efficacy of these simple measures of initial chemotherapy and adequate ventilation have been well demonstrated by studies in Veterans Administration hospitals.¹³ The rate of conversion of the tuberculin test in these hospitals' personnel was about 2.3% for the year 1963. At this rate, the average time required for infection was about 43 years. This was achieved in spite of the fact that Veterans Administration cares for large numbers of tuberculosis patients. The reasons for this are that almost all hospitalized patients were rendered not infectious as a result of intensive chemotherapy and the above methods of ventilation and ultraviolet light irradiation were utilized to reduce contamination of the air which was breathed by all persons within the hospital. If these results can be obtained in a hospital which cares for large numbers of infected tuberculosis patients, similar results should be easily obtained in community hospitals where smaller numbers of tuberculosis patients are seen. Guidelines for the general hospital in the admission and care of tuberculous patients have been published by the American Thoracic Society.¹⁴

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Indications: Serious infections due to susceptible strains of *E. coli*, *Proteus* sp., *Enterobacter aerogenes*, *K. pneumoniae*, *Serratia marcescens* and *Mima-Herellea*. Culture and sensitivity studies should be performed.

Contraindications: A history of hypersensitivity to the drug. Prior auditory damage by kanamycin or other agents may be a contraindication if effective, alternative therapy is available.

Precautions: Obtain audiograms before and during therapy in patients with renal dysfunction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules. Assess renal function periodically, both before and during therapy. If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary. In azotemic patients, the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy. Mycotic or bacterial superinfection may occur.

Adverse Reactions: Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias.

Dosage and Administration: The usual dose is 7.5 mg./Kg./12 hours I.M. The average dose is 1 Gm. daily for adults and children. The maximum total daily adult dose should not exceed 1.5 Gm. by all routes of administration. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.

Supplied: Rubber capped vials as a ready-to-use sterile aqueous solution in two concentrations: 0.5 Gm. in 2 ml. 1.0 Gm. in 3 ml. Also available—Pediatric Injection 75 mg. in 2 ml.

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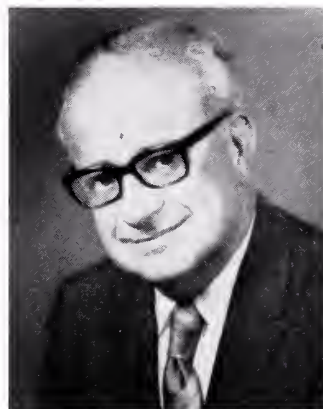
President's Message

At the risk of exhibiting undue naivety or being caught in the "squeeze" of oversimplification, I would suggest that social illnesses have been historically associated with war and/or social adjustment to same. Being medically oriented, I feel that the sociologic etiology of war and the failure of society similarly to adjust smoothly or to be unduly symptomatic is based on bigotry, lack of education, personal deprivation, revolt and (ala Agnew) a crisis-oriented press.

In any event, apparently largely in revolt of war (or lack of peace), the prime or most conspicuous manifestations or symptoms of our current social illness are permissiveness, communal living with the associated drug abuse and undue VD experience (second most common communicable disease).

If treated definitively with promptness, these symptoms will not be totally destructive. However, if not identified (and they are very much the concern of medicine, parents, citizens and counselors) and treated, the etiology of these symptoms will destroy not a generation, but generations. Medicine must offer its expertise and energy to educators, law enforcement people, the judiciary and clergy and shore-up its own diagnostic and therapeutic talents to bring this socially-destructive trend under control.

I am eager to be a part of the effort as I am sure you are.



Gerald L. Miller, M.D.

This Is the Season for Giving!

MISSOURI STATE MEDICAL FOUNDATION

515 East High Street
Jefferson City, Missouri 65101

Dear Doctor:

"Missouri physicians helping Missouri young people attend medical school."

The above words state the purpose of the Missouri State Medical Foundation which has provided more than 700 loans for qualified medical students since 1960.

The money for these loans has been made available through the generosity of the practicing physicians of Missouri.

Despite this past and present generosity, however, there still is not enough money to provide all the loans we would like to make.

You, as a practicing physician in Missouri, can make more funds available by contributing to the Foundation. Such donations are tax deductible, and now, near the close of the tax year, is an excellent time to make your 1971 gift.

In this day when the need for more physicians is so great, we of the Missouri State Medical Association can do something about filling this need by providing loans to medical students who are residents of our state. I am certain that you would not want the Foundation to turn away any deserving student because of a lack of funds.

Make your check payable to the "Missouri State Medical Foundation" and mail it to Box 1028, Jefferson City, Mo. 65101. Today is not too soon.

Sincerely yours,

Byron M. Stuart, M.D.

President

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ASSOCIATION

Woman's Auxiliary



The MSMA Woman's Auxiliary Fall Conference in Cape Girardeau on October 20-21 stressed the following Auxiliary programs:

1. *Children and Youth*, with particular emphasis on venereal disease, drug abuse and the communications gap.
2. *Environmental Health and Ecology*.
3. *Legislation*.

The Woman's Auxiliary has been actively concerned with these programs in recent years and has worked effectively in each category. It is my thought that even though each program attacks different major problems, the combination pinpoints what we all want for our youth, namely, healthy minds and bodies, a clean world in which to live and laws to assure both. Hopefully, our fall meeting will result in the acceleration of our interest and efforts.

At the WA-AMA Convention recently, Mr. W. A. Johnson, Jr., Chairman of the Board of Myers-Info-plan, International, said, "Be yourself, not the doctor's wife! You don't need your husband to be you. You can keep the practice of medicine and the profession by applying your brains, energy and talents to communicate with people." At the same convention, President Richard M. Nixon said in his address to the AMA House of Delegates, "America at this time needs leadership from those in the medical profession and their wives" and "The responsibility for the health of the nation is in your hands." These statements were made in preparation for his request to the AMA to help combat a great national problem, drug abuse. He particularly asked that we realistically inform the youth of today about the dangers of drug abuse.

For all of these reasons, I encouraged the members of the Woman's Auxiliary to attend the Fall Conference. Communication is a key word and important to each program and to us, as individuals. We want to learn, to share problems of great concern and to communicate with each other. Then, our job is to go home and communicate with people in our own communities.



Mrs. Frank J. Valach
President

EDITORIAL

A CRISIS IN OUR TIME

Our life and times in these United States have many attributes. We have more than our share of food, warmth and comfort. In the era of atoms, we even have a degree of security. At least, we know we are going to be all alive or all dead. The clarity of that choice evidently is adequate for us for we continue to live and work and not demand a saner solace.

Food, warmth, comfort? This country has its share, but with an uneven distribution, and the spoils of the nation's success are not acceptable to 20% of our population. And the issue is fought out with hate, fire, words and votes.

Much of the revolution being waged in our society today by the present generation has to do with food, housing, jobs, but, even more, it has to do with the nonmaterials sounded in the tingling quality of that sentence which justified the existence of this nation, "All men are created. . . ."

All Men Are Created Equal in Sickness and Health?

Any acceptance that "all men are created equal" quickly involves food, housing and jobs, but just as basically, it involves the right to equal health and to equal health care. And so, where is medicine? Many circumstances have forced the medical profession to become involved in the changes of contemporary life. In agreeing that "equality of man" is not a slogan but a guarantee of a basic right, and that in addition to food, warmth and comfort, a man deserves health, society has demanded total availability of medical care for all citizens, the first crisis in American medicine. Physicians must accept that we are a service, and that money, color or location will not determine the availability of care. Elected officials have interpreted this to be the will of the people, and legislation has provided methods of doing this, perhaps with the involvement of organized medicine. Medical school administrators, desperate for funds, already dependent upon federal research support, see new possibilities of support through "medical delivery" funding. The improbability of providing equal care to all and the improbability of finding sufficient primary physicians make many of us shake our heads in rueful distrust. Many of us know that the promised land may not be reached, but an increasing number of us knows that the effort is going to be made and we are going to try to be useful in meeting the challenge.

Primary Physicians and Comprehensive Plans

These actions involving the social system of medicine have occurred parallel to another significant movement within the medical profession. I am referring to the sharpened awareness of the importance of the final basic unit of any system of medicine, that is, the ultimate man who makes the face-to-face contact with the patient—the personal physician.

Large concepts involving masses of people and comprehensive care are evolving in this country. But no matter how large or how elegant or how mechanistic, there remains a final point when the patient and the physician close off the outside world and have a private physician-private patient relationship. One of the major reasons that the American physician and his organizations have long resisted outside interference with the practice of medicine has been their underlying basic understanding that the individual and the public welfare are best served by this final personal physician, family physician, primary physician role.

This truism has now been validated by numerous national study commissions. The findings can be reduced, inadequately, to a single sentence: a patient is best served if he has one basic doctor to whom he always turns for health problems; the country does not have enough such doctors.

A second crisis in American medicine: there are not enough physicians choosing a career as a family physician.

Therefore, I have now reached the objective of this paper: the crisis in medicine is but part of the large revolution of our times and that this crisis, as it relates to medicine, is simply stated, "How can the physicians provide every citizen full and equal access to care, and how can we provide sufficient family physicians to meet this immense nationwide family care program?"

Alternate Routes

Answers in part are already in motion.

Medical schools are developing family care community health programs. Full family care, with and without presickness insurantee packages, involving all income levels, not only the indigent, is now in motion.

The University of Missouri-Kansas City Medical School provides an administrative structure which

has the possibility of bringing physicians and their community hospital staff structure into an "open medical school era." Medical education properly used, shrewdly used, deliberately used and helpfully used, can give these physicians and their hospitals a new scholarly role. Premedical and medical students can be the stimulus that makes teachers of these competent men.

Again, The Challenge

Again, I state the challenge: how do we provide equality of care to all, and how do we multiply the basic final interface men, the primary physician?

Optimist that I am, I believe that the problem was practically solved when the physicians finally reached the level of identifying the question. Professional and public awareness, which has resulted in the Millis Report, the Coggeshall Report, the Comprehensive Health Act, the Regional Medical Program Act, the Willard Report and the American Academy of General Practice's proposal for an American Board of Family Practice, proves we have not only identified the question, but have, through the vocal process which characterizes a democracy,

begun pointing and counterpointing with solutions and antisolutions.

It is a compliment to the medical profession that we are understanding and even accepting the social changes which have brought Medicare, the Regional Medical Program Act, the Comprehensive Health Care Act, the Kaiser Hospitals, group practice, etc. Physicians are a part of the crisis of medicine; we also are a part of our times. By involvement, we may not determine the solutions, but, at least, we can guide through push and pull, give and take, persuade and be among those counted present.

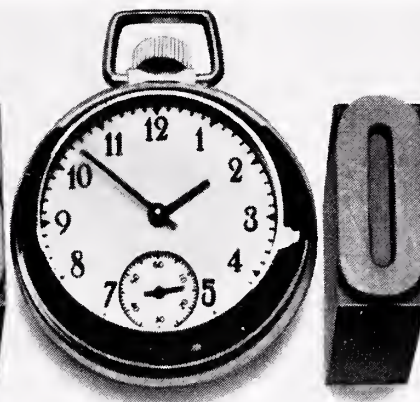
These answers, in part, have guided those individuals behind the development of the new UMKC Medical School. Through its unique relationship to the University and to the community, the School represents a departure from the emphasis used by other medical schools in the nation.

E. GREY DIMOND, M.D.
Provost for the Health Sciences
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WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with

withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

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County Society News

FIRST DISTRICT

COUNCILOR

JOHN N. MARTIN, M.D., ST. JOSEPH

GRAND RIVER MEDICAL SOCIETY

The Grand River Medical Society and Woman's Auxiliary met at the Strand Hotel in Chillicothe on September 9. Thirty physicians and wives attended the social hour and dinner.

Dr. Joseph Conrad, Chillicothe, discussed the Regional Medical Program during the Medical Society meeting.

FRANK R. DALEY, M.D., *Secretary*

SECOND DISTRICT

COUNCILOR

LYSLE M. BACH, M.D.

CHARITON-MACON-MONROE-RANDOLPH COUNTY MEDICAL SOCIETY

The Chariton-Macon-Monroe-Randolph County Medical Society held its regular meeting in September in the library of Woodland Hospital.

The program, arranged by Dr. Robert V. Tompson, was presented by Dr. Frank Mitchell, associate professor of surgery at the University of Missouri Medical Center in Columbia. His subject, "Ambulances and Personnel," was illustrated by a number of color slides. He remarked that the Randolph County ambulances are well-equipped and of good design and that the attendants were among the first to be trained in the program at MUMC where 700 ambulance personnel have now completed courses.

Physicians attending the meeting were Drs. D. E. Eggleston and J. E. Campbell, Macon County; F. L. Harms, Chariton County; F. A. Barnett, Monroe County; and Josephine D. Baker, J. W. Fleming, Jr., T. S. Fleming, R. H. Young, W. D. Chute, C. C. Cohrs, L. E. Huber, P. V. Dreyer, R. V. Tompson and G. R. Hudson, Randolph County.

W. D. CHUTE, M.D., *Secretary*

SIXTH DISTRICT

COUNCILOR

WILLIAM D. BRADSHAW, M.D.,
CLINTON

LAFAYETTE-RAY COUNTY MEDICAL SOCIETY

The Lafayette-Ray County Medical Society meeting was held on September 14 at Maib's

Cafe in Lexington. Eighteen members and guests were present for the dinner and meeting.

Dr. Joseph S. Cope presided at the business meeting and election of officers. Newly-elected officers are Drs. Joseph S. Cope, President; W. Wayne Boydston, President-Elect; and Walter E. Koppenbrink, Jr., Secretary-Treasurer. The Delegates to the MSMA and Alternate Delegates of both counties remained as elected in 1971. They are Doctor Koppenbrink, Delegate, and Dr. Jordon Kelling, Alternate, Lafayette County; and Dr. K. Herbert Huber, Delegate, and Dr. Franklin A. Crozier, Alternate, Ray County.

Following the election of officers, Doctors Cope and Boydston presented reports on recent actions by committees on which they serve for the Missouri State Medical Association. The meeting adjourned after this discussion.

WAYNE BOYDSTON, M.D., *Secretary*

NINTH DISTRICT

COUNCILOR

E. A. STRICKER, M.D., ST. JAMES

SOUTH CENTRAL COUNTIES MEDICAL SOCIETY

The South Central Counties Medical Society met on September 22 at Lowry's Steak House in Cabool. Dr. and Mrs. Joe L. Spears of Cabool were host and hostess for the evening.

Dr. Joseph Johnston of the Smith-Glynn-Galloway Clinic in Springfield was the guest speaker. His subject was "Abortions."

A brief business meeting was held. It was voted to cancel the October meeting of the Society so that members could attend the Ninth Councilor District dinner in Salem as a group.

Attending the dinner and meeting were Dr. and Mrs. Joe A. Wall, Dr. and Mrs. James Hasek, Dr. and Mrs. Martin Hasek, Dr. and Mrs. C. W. Cooper, Dr. and Mrs. M. L. Fowler, Dr. and Mrs. Amos L. Coffey, Dr. and Mrs. Jack N. Wiles and Drs. Richard Denney, W. T. Morgan and George Brown, who is joining the Doctors Hasek in practice in Mountain Grove.

JACK N. WILES, M.D., *Secretary*

TENTH DISTRICT

COUNCILOR

EUGENE T. HANSBROUGH, M.D.,
POPLAR BLUFF

MINERAL AREA MEDICAL SOCIETY

The Mineral Area Medical Society met in the Hootor Building at the Farmington State Hospital on September 23.

The scientific portion of the meeting was presented by Allen Klippel, M.D., Professor of Surgery at Washington University, who lectured on methods of reducing the death toll resulting from highway accidents.

President Edward Mardini conducted the business meeting. Dr. George L. Watkins' motion to dispense with reading the minutes of the May and July meetings was approved. Dr. Charles W. Chastain reported that he would be able to arrange the medical-legal banquet on October 24. Guest speaker will be Congressman William Burlison who will discuss federal medical programs.

Due to the fact that Thanksgiving falls on the usual meeting day in November and to the Christmas holidays, it was decided to schedule the next regular meeting in January, 1972. Tentative plans will be to have a dinner meeting with the members' wives and feature a scientific program demonstrating the use of video tape in medical education.

Doctor Chastain reported that the bill to require hospital staff membership by physicians using the hospitals had been passed by the Missouri Legislature, signed by the Governor and would take effect at once. He pointed out that the bill emphasizes the responsibilities of the hospital governing board.

Members were reminded that the annual election will be held at the October meeting.

In addition to ambulance drivers and representatives of the ambulance services in St. Francois and Madison Counties, the following physicians attended the scientific program: Drs. Edward Mardini, Juan Cancelada, Kirby L. Turner, Retus W. Osborn, Emmett F. Hctor, Jack Mullen, Norma D. Farmer, George L. Watkins, Jr., Chastain, Metin Arat, Marvin Grossman and Raymundo Talaban.

CHARLES W. CHASTAIN, M.D., *Secretary*

PERRY-STE. GENEVIEVE COUNTIES MEDICAL SOCIETY

The Perry-Ste. Genevieve Counties Medical Society held its election of officers on Sept. 20, 1971.

Officers elected were Drs. L. W. Feltz, Perryville, President; Alfred E. McDermott, Perryville, Vice-President; and Dr. J. F. Lutekwite, Ste. Genevieve, Secretary-Treasurer.

Members who were elected as Delegates and Alternate Delegates to the MSMA for 1972 are Drs. J. F. Fairchild and Alfred E. McDermott, Perry County; and Drs. William F. Utterman and Gerard DeGenova, Ste. Genevieve County.

JOSEPH F. LUTKEWITTE, M.D., *Secretary*

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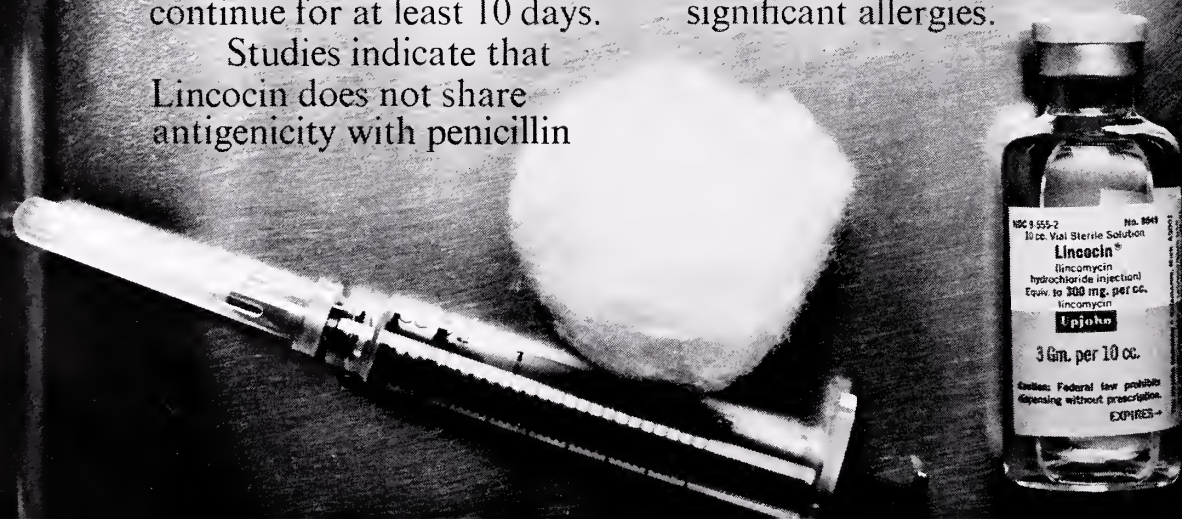
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Hypersensitivity to penicillin is a good reason to consider Lincocin[®] (lincomycin hydrochloride)

Lincocin (lincomycin hydrochloride, Upjohn) has produced a high percentage of satisfactory responses in patients with mild, moderate and severe infections due to susceptible streptococci, pneumococci and staphylococci (including many penicillinase-producing strains). With β -hemolytic streptococcal infections, treatment should continue for at least 10 days.

Studies indicate that Lincocin does not share antigenicity with penicillin

compounds. However, hypersensitivity reactions such as angioneurotic edema, serum sickness and anaphylaxis have been reported, some of these in patients known to be sensitive to penicillin. As with any antibiotic, Lincocin (lincomycin hydrochloride, Upjohn) should be used cautiously in patients with histories of asthma or other significant allergies.



So is penicillin-resistant staph.

Lincocin (lincomycin hydrochloride, Upjohn) has been demonstrated to be effective in susceptible penicillinase-producing staphylococcal infections resistant to penicillin (including ampicillin). However, resistant staphylococcal strains have been recovered; resistance appears to occur in a slow stepwise manner. As with

all antibiotics, susceptibility studies should be performed.

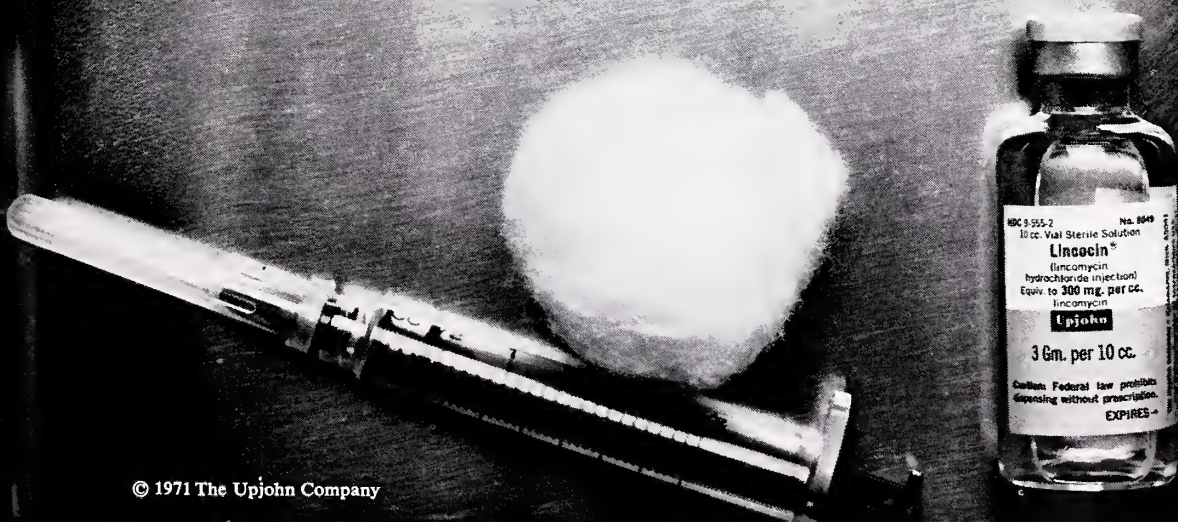
Intramuscular and intravenous injections of Lincocin (lincomycin hydrochloride, Upjohn) are generally well tolerated. Instances of hypotension following parenteral administration have been reported, particularly after too rapid intravenous administration.

Sterile Solution (300 mg. per ml.)

Lincocin[®]

(lincomycin hydrochloride,
Upjohn)

For further prescribing information, please see following page.



Lincocin[®]

Sterile Solution (300 mg. per ml.)

(lincomycin hydrochloride, Upjohn)
for respiratory tract, skin, soft-tissue, and
bone infections due to susceptible
streptococci, pneumococci, and staphylococci

Each preparation contains:

Lincomycin hydrochloride monohydrate equivalent to lincomycin base

250 mg. Pediatric Capsule 250 mg.
500 mg. Capsule 500 mg.
*Sterile Solution per 1 ml. 300 mg.
Syrup per 5 ml. 250 mg.

*Contains also: Benzyl Alcohol 9 mg.; and, Water for Injection—q.s.

An antibiotic chemically distinct from others available, indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed.

CONTRAINDICATIONS: History of prior hypersensitivity to Lincocin (lincomycin hydrochloride). Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: Cases of severe and persistent diarrhea have been reported and at times drug discontinuance has been necessary. This diarrhea has been occasionally associated with blood and mucus and at times has resulted in acute colitis. This reaction usually has been associated with oral therapy, but occasionally has been reported following parenteral therapy. Although cross sensitivity to other antibiotics has not been demonstrated, make careful inquiry concerning previous allergies or sensitivities to drugs. Safety for use in pregnancy has not been established and Lincocin is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or

significant allergies. Overgrowth of non-susceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β -hemolytic streptococci infection for ten days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angio-neurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatment. *Skin and mucous membranes*—Skin rashes, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances.

Cardiovascular—Instances of hypotension following parenteral administration have been reported, particularly after too rapid I.V. administration. Rare instances of cardiopulmonary arrest have been reported after too rapid I.V. administration. If 4.0 grams or more administered I.V., dilute in 500 ml. of fluid and administer no faster than 100 ml. per hour. **Local reactions**—Excellent local tolerance demonstrated to intramuscularly administered Lincocin. Reports of pain following injection have been infrequent. Intravenous administration of Lincocin in 250 to 500 ml. of 5% glucose in distilled water or normal saline has produced no local irritation or phlebitis.

HOW SUPPLIED: 250 mg. and 500 mg. Capsules—bottles of 24 and 100.

Sterile Solution, 300 mg. per ml.—2 and 10 ml. vials and 2 ml. syringe.

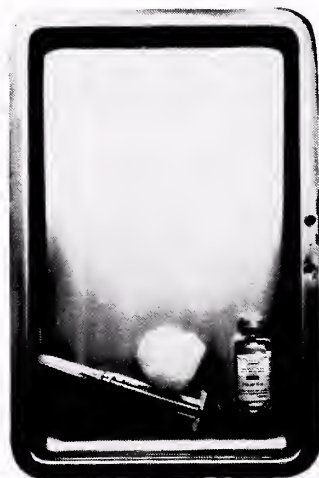
Syrup, 250 mg. per 5 ml.—60 ml. and pint bottles.

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New Members

Edward J. Ackley, D.O., 24th & Cherry, Kansas City, has become a member of Jackson County Medical Society. Dr. Ackley is a native of Cleveland, Ohio, received his preliminary education at Western Reserve University and his D.O. degree at the Kansas City College of Osteopathy and Surgery in 1945. He is in general practice.

Mete V. Altug, M.D., 3304 Roslyn Rd., Oakbrook, Ill., has become a member of St. Louis County Medical Society. Dr. Altug is a native of Nigde, Turkey, received his preliminary education at M. Kemal and his M.D. degree at the Ankara Medical School in 1957. He specializes in pathology.

Michael F. Aronoff, M.D., 4177 Broadway, Kansas City, has become a member of Jackson County Medical Society. Dr. Aronoff is a native of Philadelphia, Pa., received his preliminary education at the University of Pennsylvania and his M.D. degree at Hahnemann Medical College in 1964. He specializes in otolaryngology.

Carl F. Asseff, M.D., 660 S. Euclid Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Asseff is a native of Cleveland, Ohio, received his preliminary education at Ohio State University and his M.D. degree at the Ohio University College of Medicine in 1966. He specializes in ophthalmology.

Estrella Z. Avila, M.D., 936 Brookvale Terr., Manchester, has become a member of St. Louis Medical Society. Dr. Avila is a native of Lucban, Quezon, Philippines, received her preliminary education at the University of Santo Tomas and her M.D. degree at the University of Santo Tomas in 1962. She specializes in internal medicine.

Patricio C. Avila, M.D., 936 Brookvale Terr., Manchester, has become a member of St. Louis Medical Society. Dr. Avila is a native of Lopez, Quezon, Philippines, received his preliminary education at Santo Tomas University and his M.D. degree at the Far Eastern University in 1961. He specializes in surgery.

Jerry Bamshad, M.D., 1125 Graham Rd., Florissant, has become a member of St. Louis County Medical Society. Dr. Bamshad is a native of Shiraz, Iran, received his preliminary

education at Ebne Sinai Voluntary Schools and his M.D. degree at the University of Pahlavi School of Medicine in 1956. He specializes in dermatology.

Robert F. Betz, M.D., 113 West Hickory, Neosho, has become a member of Ozarks Medical Society. Dr. Betz is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at the University of Tennessee in 1962. He specializes in general surgery.

Tomas V. Cabrera, M.D., 525 Couch Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Cabrera is a native of Taal, Batangas, Philippines, received his preliminary education at San Beda College and his M.D. degree at the University of Santo Tomas in 1963. He specializes in general surgery.

Joseph K. Essmyer, M.D., 937 Broadway, Cape Girardeau, has become a member of Cape Girardeau County Medical Society. Dr. Essmyer is a native of Washington County, received his preliminary education at Southeast Missouri State College and his M.D. degree at the University of Missouri in 1967. He specializes in anesthesiology.

Melinda A. Fabito, M.D., 1621 Kenilworth, St. Louis, has become a member of St. Louis County Medical Society. Dr. Fabito is a native of the Philippines, received her preliminary education at Far Eastern University and her M.D. degree at Far Eastern University in 1965. She specializes in internal medicine.

William M. Fogarty, Jr., M.D., 3915 Watson Rd., St. Louis, has become a member of St. Louis Medical Society. Dr. Fogarty is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree from St. Louis University in 1960. He specializes in internal medicine.

Ronald A. Higgins, M.D., 11201 Colorado, Kansas City, has become a member of Jackson County Medical Society. Dr. Higgins is a native of Los Angeles, Calif., received his preliminary education at Central Methodist College and his M.D. degree at the University of Missouri in 1965. He specializes in dermatology.

Yung H. Hwang, M.D., 601 S. Brentwood, St. Louis, has become a member of St. Louis Medi-

cal Society. Dr. Hwang is a native of Korea, received his preliminary education at Yonsei University and his M.D. degree at Yonsei University in 1960. He specializes in surgery.

Gareth R. P. Johnson, M.D., 4240 Blue Ridge Blvd., Kansas City, has become a member of Jackson County Medical Society. Dr. Johnson is a native of Kansas City, received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1964. He specializes in pathology.

Abelardo Negrete, M.D., 2625 West Paseo, Kansas City, has become a member of Jackson County Medical Society. Dr. Negrete is a native of Mexico, received his preliminary education at the University of Mexico and his M.D. degree at the University of Mexico in 1957. He specializes in psychiatry.

Nopachai Prachasitthisakdi, M.D., 3820 Itaska, St. Louis, has become a member of St. Louis Medical Society. Dr. Prachasitthisakdi is a native of Pitsanulok, Thailand, received his preliminary education at Chulalongkorn University and his M.D. degree at the Faculty of Medicine in 1964. He specializes in urology.

Florante A. Repaso, M.D., 7332 Hazelcrest Dr., Hazelwood, has become a member of St. Louis County Medical Society. Dr. Repaso is a native of the Philippines, received his preliminary education at the University of Santo Tomas and his M.D. degree at the University of Santo Tomas in 1964. He specializes in general surgery.

James F. Sertl, M.D., 1205 Dunloe Rd., Manchester, has become a member of St. Louis

Medical Society. Dr. Sertl is a native of St. Louis, received his preliminary education at St. Mary's High School and his M.D. degree at St. Louis University in 1966. He specializes in internal medicine and cardiology.

Robert L. Stamper, M.D., 660 S. Euclid Ave., St. Louis, has become a member of St. Louis Medical Society. Dr. Stamper is a native of New York, N. Y., received his preliminary at Cornell University and his M.D. degree at the State University of New York in 1965. He specializes in ophthalmology.

Fred A. Thomas, M.D., 5601 N. Antioch Rd., Kansas City, has become a member of Clay County Medical Society. Dr. Thomas is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at the University of Missouri in 1965. He specializes in dermatology.

Jerry David Williams, M.D., 500 S. Kings-highway, St. Louis, has become a member of St. Louis Medical Society. Dr. Williams is a native of Neosho, received his preliminary education at Vanderbilt University and his M.D. degree at the University of Tennessee in 1963. He specializes in pediatrics.

Enver Yalcin, M.D., 4903 Kerth Rd., St. Louis, has become a member of St. Louis County Medical Society. Dr. Yalcin is a native of Izmir, Turkey, received his preliminary education at Inonu Lisesi and his M.D. degree at the Medical School of Istanbul in 1955. He specializes in internal medicine.

In Memoriam

Yuan, Louis S. K., M.D., St. Louis, a graduate of Aurora University French School of Medicine, 1938; member St. Louis Medical Society; age, 56; died July 3, 1971.

Bess, William E., M.D., Sedalia, a graduate of the University of Louisville, 1910; member Pettis County Medical Society; age, 88; died Aug. 16, 1971.

Correnti, Nicholas A., M.D., St. Louis, a graduate of St. Louis University, 1941; member St. Louis Medical Society; age, 55; died Aug. 28, 1971.

Kieffer, Roland S., M.D., St. Louis, a graduate of National University, 1916; member St. Louis Medical Society; age, 80; died Aug. 30, 1971.

Robinson, John A., M.D., Edgerton, a graduate of Ensworth Medical College, 1914; member Platte County Medical Society; age, 87; died Aug. 30, 1971.

Brady, Charles H., M.D., Sedalia, a graduate of the University of Kansas, 1926; member Pettis County Medical Society; age, 76; died Sept. 6, 1971.

Engman, Martin F., Jr., M.D., St. Louis, a graduate of Washington University, 1928; member St. Louis Medical Society; age, 72; died Sept. 22, 1971.

Glassberg, Bertrand Y., M.D., St. Louis, a graduate of Washington University, 1925; member St. Louis Medical Society; age, 67; died Sept. 23, 1971.

Continuing Education Coming Events

- | | |
|------------|---|
| Nov. 5-6 | M.D. Day
Missouri-Oklahoma Faculty
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Nov. 8-11 | Symposium: Internal Medicine
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Nov. 13 | 22nd Annual Dr. F. G. Thompson, Sr. Lecture
<i>"Nuclear Impact on the Field of Medicine,"</i> Sen. Stuart
W. Symington
Thompson, Brumm & Knepper Clinic, St. Joseph 64502 |
| Nov. 17-18 | Problems of the Eye: Intrinsic and Systemic Diseases
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Nov. 17-19 | Recent Clinical Advances in Pediatrics
Danciger Institute for Health Sciences
Menorah Medical Center, Kansas City 64110 |
| Nov. 17-19 | Symposium: Medical Technology
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Dec. 6-8 | Symposium: Gynecology and Obstetrics
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Dec. 8-10 | Comprehensive Care in the Arthropathies
Danciger Institute for Health Sciences
Menorah Medical Center, Kansas City 64110 |

Ph.D. Program in Health Care Systems Design at M.U.

The National Center for Health Services Research and Development of the Department of Health, Education and Welfare has recently awarded the Department of Industrial Engineering at the University of Missouri-Columbia a training grant to support a Ph.D. program in Health Care Systems Design. This grant provides additional resources to support the Department's extensive current commitment in this area.

A vital feature of the program is the unique collaboration between the University School of Medicine and the College of Engineering. The program emphasizes industrial engineering analysis tools, as well as medical diagnosis and treatment practice, health care organization and

methods of health care systems evaluation. These areas of emphasis are applied in a series of design experiences. The program culminates in an original research dissertation.

A limited number of openings for admission and financial support are available to highly qualified persons with medical, paramedical, engineering and science backgrounds, who have a professional commitment to research, design or management of health care systems. Persons with a strong quantitative background who are interested in the program may write for more information to H. Allan Knappenberger, Ph.D., Professor and Director of Graduate Studies, Department of Industrial Engineering, University of Missouri, Columbia, Mo. 65201.

ELLIS FISCHEL STATE CANCER HOSPITAL (EFSCH)
and
CANCER RESEARCH CENTER (CRC)
SEMIANNUAL PROFESSIONAL PROGRAM

"Colon Cancer"
Including Medical Logic of Clinical Management

Nov. 20, 1971

Ramada Inn, Columbia

- 8:00 AM Registration (No fee)
- 8:30 AM *Natural History of Colon Cancer—General Summary of Current Problems*, John S. Spratt, Jr., M.D., M.S.P.H., Chief Surgeon, EFSCH and Director, CRC.
- 9:00 AM *Theory of Medical Logic—How Can It Be Useful*, Francis R. Watson, Ph.D., Chairman, Department of Biomathematics, CRC.
- 9:30 AM *Colon Cancer Logic Program*, Carl O. Knutson, M.D., Surgeon, EFSCH.
- 10:15 AM *Coffee Break*
Demonstration of Medical Logic on a Computer Terminal.
- 11:00 AM *Primary Treatment of Colon Cancer—No-Touch Isolation Technique*, Rupert B. Turnbull, Jr., M.D., Chief, Department of Colon and Rectal Surgery, Cleveland Clinic.
- 11:45 AM *Lunch*
- 1:15 PM *Detection of Colon Cancer Recurrence*, Hiram C. Polk, Jr., M.D., Chairman, Department of Surgery, University of Louisville School of Medicine.
- 2:00 PM *Management of Hepatic Metastases*, William L. Donegan, M.D., Surgeon, EFSCH and Clinical Research Unit Director, CRC.
- 2:30 PM *Management of Recurrent Intestinal Obstruction*, Robert L. Glass, M.D., Surgery Consultant, EFSCH.
- 3:00 PM *Coffee Break*
- 3:15 PM *Systemic Chemotherapy for Carcinoma of the Colon*, Reginald P. Pugh, M.D., Chief of Staff and Chief of Department of Medicine, EFSCH.
- 3:45 PM *Implications of Medical Logic*, Francis R. Watson, Ph.D.
- 4:00 PM *Adjourn*

The EFSCH-CRC Professional Program is open to any interested health professional. The program has been approved for five elective credit hours by the AAGP. For more information, write to Francis R. Watson, Ph.D., Cancer Research Center, Business 70 and Garth Ave., Columbia, Mo. 65201.

What Is Medical Logic?

Medicine is generally considered an art rather than a science. Part of the reason is that there seems to be a paucity of explicit rules. In fact there is a very large number of explicit rules in the practice of medicine. However, these have seldom been linked or organized to produce a usable framework.

The development of the "medical logic" concerning a particular medical problem, such as the management of colon cancer, is nothing more than organizing the totality of all known facts and rules which apply to that problem. The logic will be "good" to the extent that it removes ambiguity and links the facts such that reasonable decisions regarding the medical management of given patients may be derived from its use.

Such a set of explicit statements will aid in the transition of medicine from an art to a science and give the practitioner greater versatility than ever before possible.

Dr. Paul Young, Mayor Wheeler to Speak at AAMA Symposium

Paul R. Young, M.D., Medical Director, Continuing Medical Education, University of Missouri-Columbia School of Medicine, and Jane Berry, Ph.D., Assistant Dean and Director, Continuing Education at the University of Missouri-Kansas City, will be featured speakers at an Educational Symposium to be presented by the Jackson County Chapter, American Association of Medical Assistants on Nov. 21, 1971 at Research Hospital and Medical Center in Kansas City.

Charles B. Wheeler, Jr., M.D., Mayor of Kansas City, will be the guest speaker at the luncheon. Theme of the convention will be "The Trend Is Toward the Trained."

Other featured speakers will include Rex Kenyon, M.D., Pathologist from Oklahoma City; Mrs. Edith Mardiat, R.R.L., Director of Medical Records and School of Medical Record Technology at Research Hospital and Medical Center; and Miss Maxine Williams, first president of the AAMA.

Physicians and personnel employed by physicians are invited to attend. The registration fee of \$6.00 includes the luncheon. Registrations should be mailed immediately to Miss MaryBelle Harbit, 5000 Oak St., Apt. 226, Kansas City, Mo. 64112.

Dimetapp Extentabs®

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.

PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.

ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.

HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.



"We'll be a little late, Hazel."



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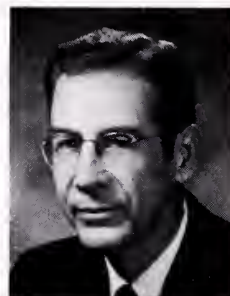
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S. W. Missouri Surgeons Elect Dr. Jerry H. Allen President

Dr. Jerry H. Allen, M.D., Springfield, was elected president of the Southwest Missouri Chapter of the American College of Surgeons at the 19th Annual Fall Meeting of the Chapter in Joplin on Sept. 15, 1971.

Doctor Allen is a graduate of Washington University School of Medicine and served his internship at Barnes Hospital in St. Louis before taking a residency at the State Cancer Hospital in Columbia and the Veterans Administration Hospital in St. Louis.



Jerry H. Allen, M.D.

Also elected at the meeting were Drs. Samuel C. Wittmer, Springfield, Vice-President, to serve a one-year term, and Ned B. Chase, Joplin, Councilor, to serve a three year term. Remaining on the Council are Drs. Charles J. Ash of Springfield, Secretary-Treasurer; J. W. Clawson, and William W. Wood, Springfield, Councilors; and John G. Esch, Pittsburg, Kan., Immediate Past-President.

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WANTED—Family physicians, internist, pediatrician and orthopedist for solo but medically congenial practice in 128-bed, JCAH-accredited hospital in well-located Southern Indiana city. Maury Gray, Adm., Dunn Memorial Hospital, Bedford, Indiana 47421.

FOR SALE—Bio Dynamics Unimeter 250 with tests, \$250; Record O Fone Model 100 with remote playback signal, \$300. Windsor B. Atcheson, M.D., P.O. Box 71, Phone 816-359-2218, Trenton, Mo. 64683.

WANTED—Young, dynamic, duck and goose hunter, spelunker, canoe floater and camper. Also must occasionally practice with Internal Medicine Group of Cape Girardeau, Missouri. We are at present a group of four representing general internal medicine, cardiology, gastroenterology and allergy. Gradual expansion planned to seven or eight. Dynamic practice in an All American City (Look Magazine) in a dynamic state! Particularly interested in internist with hematology and/or oncology

subspecialty. Others will be given strong consideration. Moving into new building in multispecialty Doctors' Park. Rapid progress to full partnership in two years. Write immediately. Charles F. Bahn, M.D., Internal Medicine Group of Cape Girardeau, 1902 Broadway, Cape Girardeau, Missouri 63701.

GP WANTED—To join four-man corporate group. Fifty-minute divided highway downtown St. Louis; 81-bed accredited hospital. Excellent hunting and fishing, four golf courses within 15 minutes. Salary \$30,000 start with eventual membership in group. Contact Jack Mullen, M.D., 30 N. Allen, Bonne Terre, Mo. 63628 or call collect—314-358-2146.

DOCTOR—Please take home each copy of your **MISSOURI MEDICINE!** Members of the Woman's Auxiliary have expressed an interest in reading your **MSMA Journal**.



For Insomnia...
Noludar[®] 300
(methyprylon)
**one capsule
for the rest
of the night**

Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of child-bearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

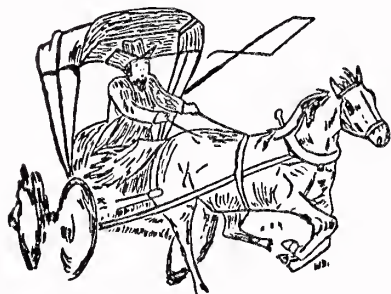
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.



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Missouri Medicine in Review



FORTY YEARS AGO

On the 20th of October, the St. Louis Medical Society and the St. Louis Society for the Blind met in commemoration of the 50th anniversary of the inauguration of the Crede method of preventing ophthalmia neonatorum. Among the latest reports is that of the Maryland School for the Blind, typical of records of all similar schools. In 1905, 40% of the new admissions and 27% of the total enrollment of the school were cases of unnecessary blindness.

The National Society for the Prevention of Blindness reported the incidence of new cases of ophthalmia neonatorum in all schools for the blind in 1930 as 9.3%. In 1921, the Missouri Legislature passed a bill requiring the use of a prophylactic in the eyes of newborn babies. The recent action of Governor Emmerson of Illinois in vetoing a bill requiring the instillation of a prophylactic in the eyes of newborn babies is an astounding step backward to the Dark Ages. The Governor based his action on an opinion of the Attorney General of the state holding that the enforcement of such a law exceeded the police power of the state and that individuals have fundamental rights which must be respected.

TWENTY-FIVE YEARS AGO

It has been six years since Landsteiner and Wiener reported to the scientific world the discovery of the Rh factor, and everyday literature is becoming more voluminous with additional

papers regarding this important contribution to medical science. The Rh factor has clinical importance in two conditions, namely, intra-group transfusion reactions and fetal erythroblastosis. It also has some forensic value in excluding paternity and in examination of blood stains. The Rh factor is an antigen present in the red blood cells of 87% of white people and absent in the other 13%.

The Linn County Medical Society met in the office of Dr. Roy Haley, Brookfield, on September 5. The meeting was preceded by a dinner. Dr. Howard B. Goodrich, Hannibal, President of the MSMA, spoke on "Problems of the Missouri State Medical Association." Present at the meeting were Drs. Haley, S. T. Brownfield, M. H. Rhoades, Guy A. Koon, R. W. Bohnsack, J. H. Lucas, Brookfield; A. C. Campbell, B. B. Hurst, Marceline; E. F. Weir, Meadville; and J. P. Cantwell, Bucklin.

TEN YEARS AGO

Among 1,103 surgeons inducted as Fellows by the American College of Surgeons at a meeting in Chicago in October were the following Missourians: Drs. Carl H. Almond and John H. Landor, Columbia; Burleigh E. DeTar, Jr., Joplin; John L. Barnard, Jr., Thomas M. Holder, Raymond A. McCanse, Paul T. McGannon, Earl G. Padfield, Jr. and Leonard A. Wall, Kansas City; H. Graham Parker, Platte City; Arne E. Carlson, St. John; Matt H. Backer, Jr., Donald T. Behrens, M. Richard Carlin, Dominic V. Costa, Raymond O. Frederick, Robert E. Funsch, George T. Gafney, Meredith J. Payne, James Pennoyer, James J. Seeley, John S. Spratt, Jr. and Valle L. Willman, St. Louis; Max A. Heeb, Sikeston; Erin M. Dillard and Vernon W. Kolze, Springfield.

Forty coaches from the various high schools in the area attended the second annual High School Football Injury Symposium at the meeting of the West Central Missouri Medical Society at the Nevada Country Club. Dean Vernon Wilson of the Missouri University School of Medicine was present. Dean Wilson flew Mr. Charles Rash, member of the M. U. football coaching staff and a program participant, to the meeting.

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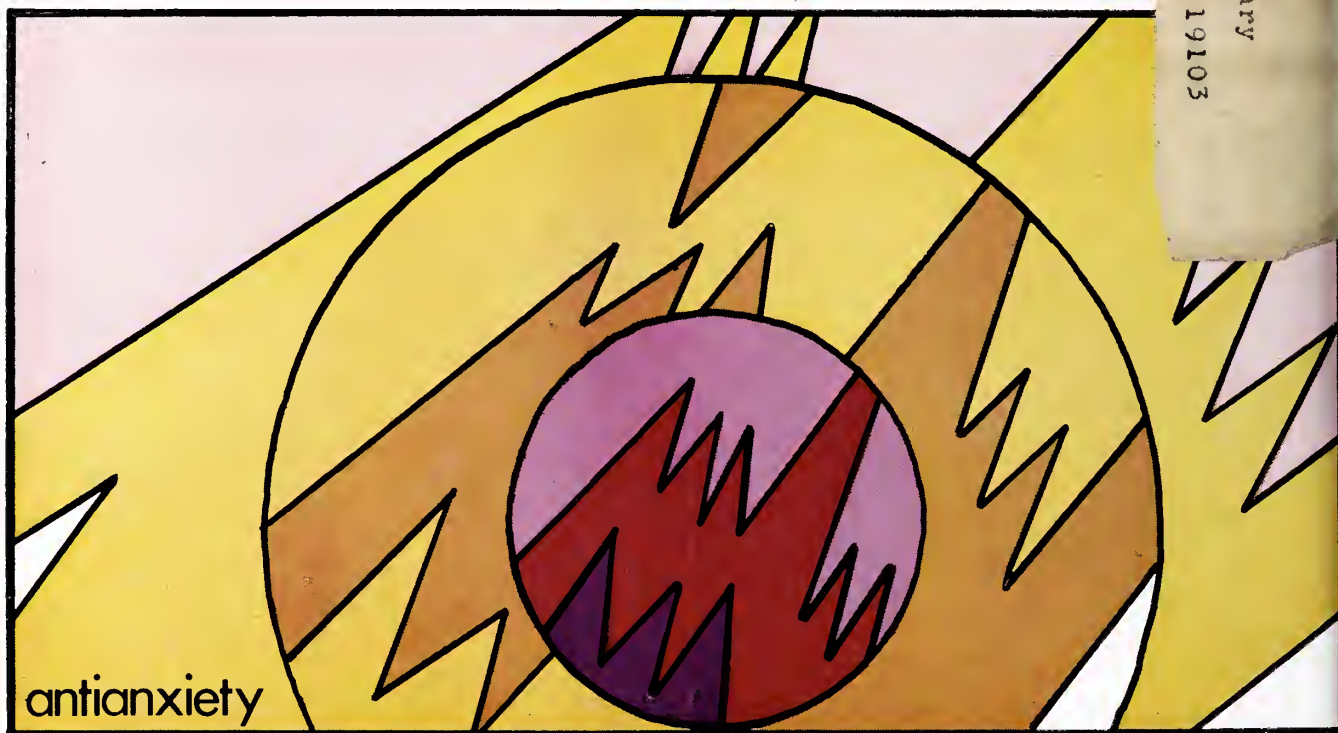
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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending

depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances, syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.



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114th MSMA Annual Session
April 6-9, 1972, Kansas City

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Patients fell asleep quickly

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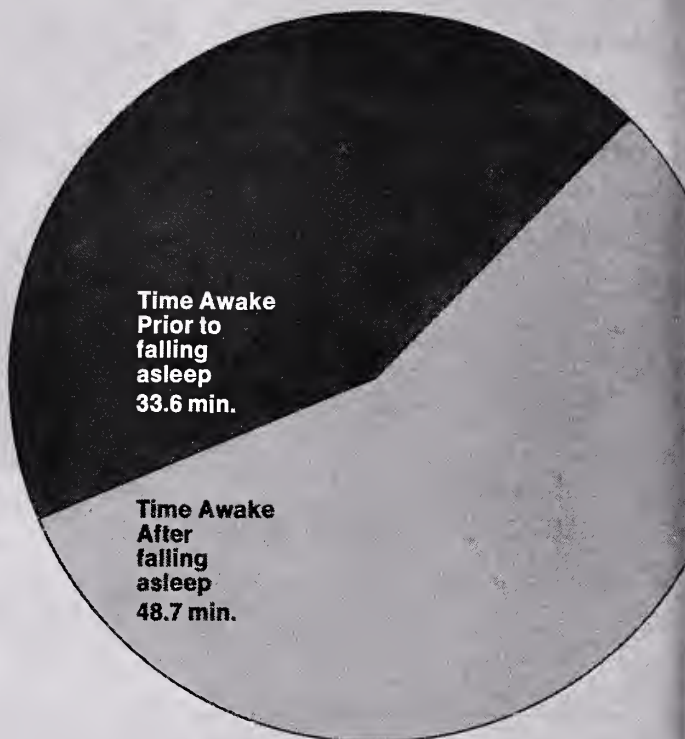
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References: 1. Frost, J. D., Jr.: "A System for Automatically Analyzing Sleep," Scientific Exhibit presented at Clinical Convention, A.M.A., Boston, Nov. 29-Dec. 2, 1970, and Aerospace M.A., Houston, April 26-29, 1971.

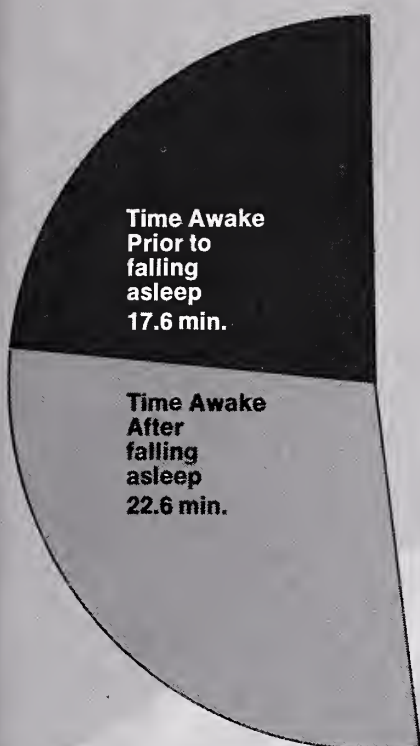
2. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley, N.J.

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average sleep laboratory measurements in cited studies

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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

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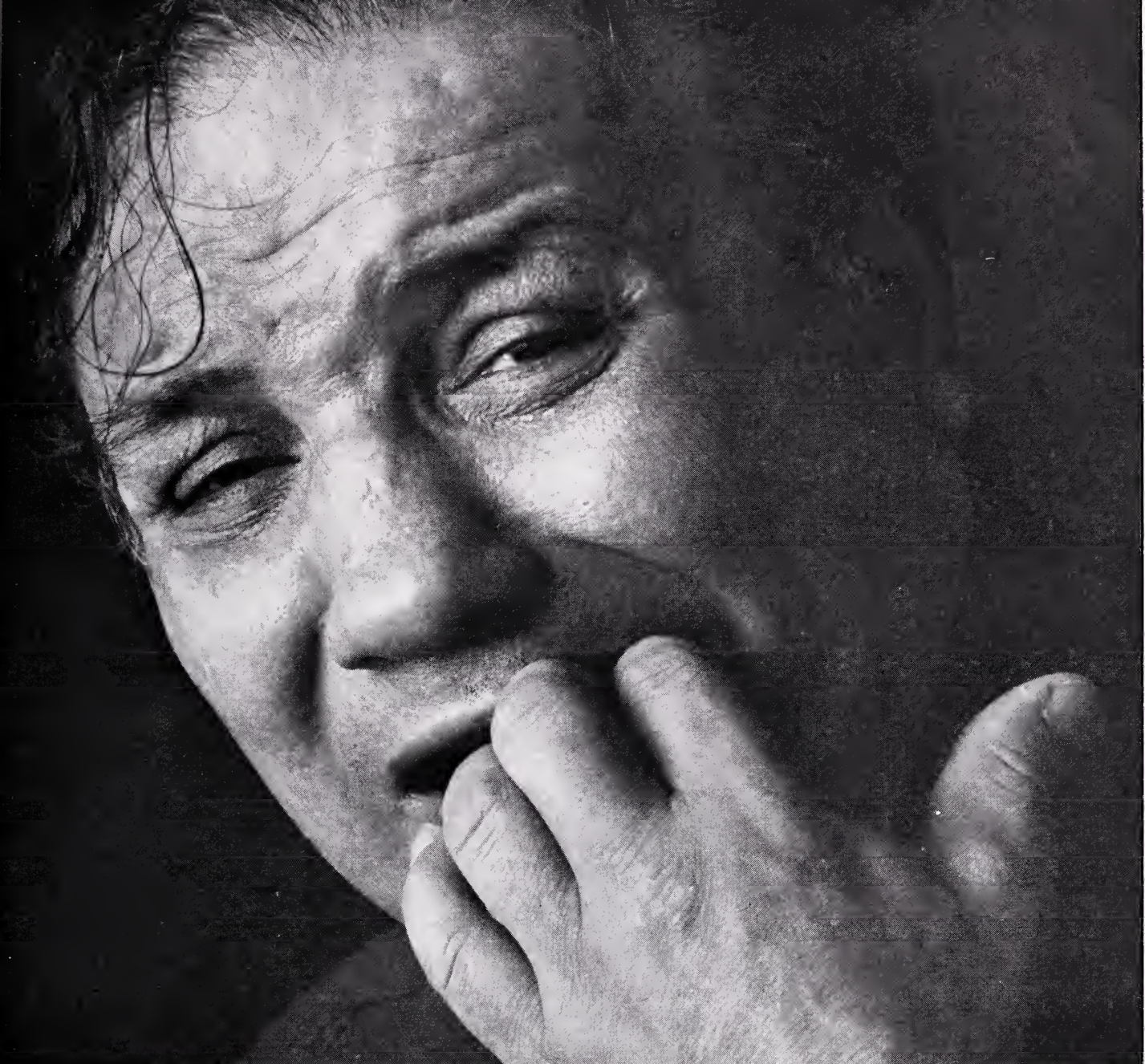
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terene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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OPPONENT'S VIEWS OF HMOs OUTLINED

Editor's Note: The following article is the last of a series of three concerning Health Maintenance Organizations reprinted from the "CMA News" published by California Medical Association. This final article points out Opponent's View of HMO's. The earlier articles were published in the October and November issues of MISSOURI MEDICINE.

Opponent's Views

1. A proliferation of Health Maintenance Organizations competing for enrollees in a given locality could create formidable problems for government and the professions in assuring the adequacy and quality of services.

2. The entry of profit-oriented organizations into the health care industry could produce a crop of HMOs out for a "quick buck." This could not only be destructive to the HMO concept but could also be disadvantageous and harmful to the patient.

3. Fiscal soundness has first priority; a fixed price contract forces economical operation in a highly competitive market. Widespread "cutting of corners" would be to the disadvantage of the patient. External mechanisms (government or peer) would be required to provide on-going monitoring of services and compliance with the contract.

4. Since the quality of medical care can only be evaluated by professionals, an additional burden would be placed on the already over-extended physician supply due to the requirements which new regulations could impose upon them as participants in an HMO.

5. Protection of the beneficiary prior to his election of an HMO, as well as in the course of his membership, would require internal and external surveillance exceeding that now provided by existing prepaid group practice plans. (While current programs are exposed to the possibility of some over-utilization and abuse, these lend themselves to computerized monitoring.) The HMO, however, will need surveillance over the quality of services which will require professional record review, survey and continuing evaluation of performance.

6. The HMO is exposed, just as are other health insurance mechanisms, to the risk of costs over-

running the contractually stipulated rate because of skewed and adverse enrollment selection, over-utilization from unforeseen catastrophic conditions or expenses, or from incorrect budget estimates. The opportunity to build a surplus for contingency may not be available. Last year's Senate version stipulated that any profits, including excess income, would have to be returned in the form of additional benefits or a reduction in the enrollee's charge for the deductible and co-insurance coverage under Medicare.

7. There is reason to be concerned that the HMO will attract a disproportionate enrollment of poor-risks. The capitation charge to be negotiated with a HMO can exceed 95 per cent of the estimate and adjusted amount that would have been incurred by Medicare under conventional reimbursement methods. Under the House version, benefits provided by an HMO must, at minimum, include the benefits of Parts A and B of Medicare. The Medicare beneficiary with a poor-risk status would have an incentive to enroll and, in so doing, would not receive reimbursement for other than emergency care received outside the plan. HMOs would be particularly attractive to persons who have a high need for care; this could include the homebound elderly.

8. An HMO's contractual rate commitment would cover in and out-of-hospital services. Hospitals are subject to conditions which can increase costs, only some of which are predictable; other costs, such as wages, which go into unit costs, are beyond the control of professionals. In such a situation, the fixed rate could force a reduction in payments to professionals.

9. There exists a prevailing, but not unanimous, opinion that no HMO would be awarded an exclusive region and that, consequently, the public might have an opportunity to choose from among several HMO's competing in the same territory. If, however, such exclusives were awarded in certain regions, it might not be possible, especially in areas already served by effective peer review, to reduce to-

tal medical care costs by five per cent across the board.

10. Financial hardships are likely to be created for enrollees of relatively small and independent HMOs with limited access to highly specialized professionals and facilities. Use of service outside the HMO would be barred except for an "emergency," or if contracts specifically provided for such specialty services. This would also apply to enrollees requiring care while traveling. (This problem could be overcome if HMOs formed reciprocity arrangements.)

11. Physicians and more costly institutions, geared to deal with specialized and complicated medical conditions, might be unable to participate as HMOs because of the 95 per cent rule. Under current patterns of patient care, this might apply, for example, to medical schools and teaching hospitals. Although the HMO could provide for a full range of services, it is probable that medical schools and teaching hospitals might attempt to qualify but could be unable to fulfill their obligations in view of the specialized services they are equipped to provide.

12. The actual justification of an HMO's rate, including adjustment for services rendered outside the HMO, and ongoing evaluation, will require specially qualified governmental staff of formidable proportions. If such personnel are not available, government might have to resort to arbitrary guidelines which were not applicable to specific situations, such as expressed by the Senate version in its insistence on retroactive adjustments. A major question that arises is: if there are to be retroactive adjustments, how would they be related to the cost basis of providing services?

13. Under the House version, an HMO must provide coverage for persons at least 50 per cent of whom would be under 65. In the Senate version, this percentage must be attained within five years. This could pose a difficult actuarial and competitive problem since it may prove difficult to attract average-risk enrollees from the community into a program made basically expensive (Continued on other side of page)

AMPAC CHAIRMAN TO BE SPEAKER AT CONFERENCE

Hoyt D. Gardner, M.D., Louisville, Ky., Chairman of the Board of Directors of AMPAC (American Medical Political Action Committee) will be the speaker at the Public Affairs Conference banquet of the Missouri State Medical Association on Saturday night, January 29, 1972 at the Ramada Inn, Columbia.

All members of the Association are invited to attend the Public Affairs Conference. It replaces the County Society Officer's Conference. Opening session is scheduled for 1:55 p.m. January 29 and continues through the afternoon. A question and answer session is scheduled at the end of the afternoon program.

The Public Affairs Conference concludes on Sunday morning. The final session gets underway at 9 a.m. and will conclude with a question and answer session winding up at 12 noon.

Physicians planning to attend are invited to fill out the pre-registration blank on this page and mail it to the Association office, Box 1028, Jefferson City, Missouri 65101. Overnight reservations should be made directly with Ramada Inn, Columbia, Missouri.

Dr. Gardner, the Public Affairs Conference banquet speaker, is a native of Arkansas and received his medical education at the University of Louisville. A general surgeon in private practice, Dr. Gardner is a Diplomate of the American Board of Surgery and a Fellow of the American College of Surgeons. He is a past president of the Jefferson County Medical Society and a past chairman of KEMPAC (Kentucky Educational Medical Political Action Committee.)

COUNCIL MEETING HIGHLIGHTS

The Council of the Missouri State Medical Association met on September 18 and 19 in St. Louis. Complete minutes of the Council meeting start on page 908 of this the December issue of MISSOURI MEDICINE.

Among the highlights of actions taken by the Council.

ENVIRONMENTAL HEALTH — The Council approved a resolution supporting Proposition No. 3 which was to be voted on by Missourians on October 5 calling for the issuance of \$150 million in water pollution bonds. The proposition was approved.

CONTINUING MEDICAL EDUCATION — The Ad Hoc Committee on Continuing Medical Education was directed to develop a voluntary program of physician education in Missouri along with recommendations for a continuing medical education credit program.

MEDICAL-LEGAL — The Council approved plans of the Commission on Medical-Legal Affairs to study the recently developed AMA Professional Liability Program once information on the program becomes available. Also approved was the distribution of the results of the recent MSMA member survey concerning malpractice along with a copy of the article "Malpractice Prophylaxis" to all members of the Association. Copies of the malpractice article are also to be sent to all senior medical students and to all new members of MSMA for the next five years.

PUBLIC AFFAIRS — The Council approved tentative plans of the Commission on Public Affairs for active involvement in programs aimed at combatting both drug abuse and venereal disease.

MSMA News

HMO's (Continued)

by the high utilization rate of the poor and the aged, assuming that an HMO must be community related. (It is not necessary to make this assumption, pending information regarding regulations and specific contracts, since the HMO could have two or more universes for purposes of rate-making.)

14. Evaluation of performance techniques would be difficult to apply to the foreseeable diverse settings in which HMOs would be operating.

15. Physicians in an HMO would function as "providers of services" in their relationship to government, and would be required to comply with regulations regarding quality, administration and finance. This relationship differs from present government control in that the current relationship is with the intermediary and the physician has an indirect involvement.

16. Prepaid group practice programs (and this could apply equally to other types of practices qualifying as HMO's) have frequently resulted in impersonal care, lengthy waits for appointments and an impression of deterioration in the quality of medical care provided.

17. The lack of mobility of the "captive" patient, i.e., freedom to select a physician outside the HMO, at a time when care is needed but not available, would be inimical to the provision of good quality medical care.

18. There is no guarantee that the formation of HMO's would result in greater accessibility and availability of medical care — two of the major stated justifications for the creation of HMOs.

Public Affairs Conference

January 29-30, 1972

MAIL TO:

Missouri State Medical Assn.
Box 1028
Jefferson City, Mo. 65101

Please register me for the Public Affairs Conference of the MSMA, January 29-30, 1972, The Ramada Inn, Columbia, Mo.

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An epidemic that's striking home...

gonorrhea

There were more than 13,000 reported cases of gonorrhea in the Show Me State last year... almost one-third of them in Kansas City alone

In Missouri...and everywhere else...
a new alternative

NEW Trobicin[®]
SPECTINOMYCIN DIHYDROCHLORIDE,
PENTAHYDRATE, UPJOHN

**single-dose treatment for
intramuscular use only**

a chemically distinct antibiotic indicated specifically
for treatment of acute gonorrhea:

in the male-acute urethritis and proctitis
in the female-acute cervicitis and proctitis
when due to susceptible strains of *N. gonorrhoeae*

High cure rate:* 96% of 571 males, 95% of 294 female
(Dosages, sites of infection, and criteria for diagnosis
and cure are defined on page 3 of advertisement).

**Assurance of a single-dose, physician-controlled
treatment schedule**

**No allergic reactions occurred in patients with
an alleged history of penicillin sensitivity
when treated with Trobicin, although penicillin
antibody studies were not performed**

**Active against most strains of
Neisseria gonorrhoeae *in vitro*** (M.I.C. 7.5-20 mcg/ml)

**A single two-gram injection produces peak serum
concentrations averaging about 100 mcg/ml in
one hour** (average serum concentrations of 15 mcg/ml
present 8 hours after dosing).

*Data compiled from reports of 14 investigators.

NOTE: Antibiotics used in high doses for short periods of time
to treat gonorrhea may mask or delay the symptoms of incubating
syphilis. Since the treatment of syphilis demands prolonged
therapy with any effective antibiotic, and since Trobicin is not indicated
in the treatment of syphilis, patients being treated for gonorrhea
should be closely observed clinically. Monthly serological follow-up
for at least 3 months should be instituted if the diagnosis of
syphilis is suspected. Trobicin is contraindicated in patients previously
found hypersensitive to it.

For full prescribing information, including contraindications, warnings
and precautions, please see last page of this advertisement.

Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001

Trobicin and the gonorrhea challenge

An accelerating epidemic— a decelerating susceptibility to penicillin

Gonorrhea is now the most prevalent reported communicable disease in the nation. The estimated number of new cases of gonorrhea in the United States exceeded two million for the first time in 1970. To compound the problems, strains of *N. gonorrhoeae* increasingly resistant to penicillin and other antibiotics are appearing throughout the country. Schedules of treatment which were effective only a few years ago now result in a significant percentage of treatment failure. *In vitro* studies have demonstrated that resistance of *N. gonorrhoeae* may also develop to Trobicin.

Thus, while aqueous Procaine Penicillin G remains the drug of choice for the majority of patients, the need for a non-penicillin, intramuscular antibiotic for acute gonorrhea in the male and female is abundantly clear. Such an antibiotic should be effective following a single intramuscular injection—and it should not demonstrate cross-resistance with penicillin

Trobicin—a new alternative specifically for the treatment of acute gonorrhea

Trobicin is indicated in the treatment of acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

High cure rates:
96% of 571 males, 95% of 294 females

Clinical Results with Single-Dose Treatment, Intramuscularly* (Data compiled from reports of 14 investigators**)

	Dosage	Number of Patients	Number Cured	Percent Cured
Adult Males: Gonorrheal urethritis	2 grams	475	457	96%
	4 grams	96	93	97%
Adult Females: Gonorrheal cervicitis	4 grams	294	280	95%

Diagnosis was confirmed by cultural identification of *N. gonorrhoeae* on Thayer-Martin medium in all patients. Criteria for cure: negative culture after at least 2 days post-treatment in males and at least 7 days post-treatment in females. Any positive culture obtained post-treatment was considered evidence of treatment failure even though the follow-up period might have been less than the periods cited above under "criteria for cure" except when the investigator determined that reinfection through additional sexual contacts was likely. Such cases were judged to be reinfections rather than relapses or failures. These cases were regarded as non-evaluable and were not included in the table above.

No allergic reactions occurred in patients with an alleged history of penicillin hypersensitivity who were treated with Trobicin, although penicillin antibiotic studies were not performed.

Chemically distinct

Trobicin is structurally not related to any other antibiotic commonly used to treat gonorrhea.

The assurance of a single-dose, physician-controlled treatment schedule

Intramuscular injections should be made deep into the upper outer quadrant of the gluteal muscle.

Adult male: Single 2 gram dose I.M. in acute gonorrheal urethritis. Single 4 gram dose I.M. (should be divided between two gluteal injection sites) in gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy. In geographic areas where antibiotic resistance is known to be prevalent, initial treatment with 4 grams intramuscularly is preferred.

Adult female: Single 4 gram dose I.M. (should be divided between two gluteal injection sites) in acute gonorrheal cervicitis and proctitis.

Safety for use in pregnancy has not been established, nor has safety for use in infants and children.

The following reactions were observed during the single dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.

During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single and multiple-dose studies in normal volunteers, a reduction in uric acid output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

*4-gram doses were injected in two gluteal sites.

**Medical Research Files, The Upjohn Company

a chemically distinct antibiotic indicated
specifically for treatment of
acute gonorrheal urethritis and proctitis in males
and cervicitis and proctitis in females
when due to susceptible strains of *N. gonorrhoeae*

new **Trobicin®**

STERILE SPECTINOMYCIN DIHYDROCHLORIDE
PENTAHYDRATE, UPJOHN

single-dose treatment for intramuscular use only

Sterile Trobicin®

spectinomycin dihydrochloride pentahydrate)—For Intramuscular injection: 10 ml vials containing 5 ml when reconstituted with diluent. 4 gm vials containing 4 ml when reconstituted with diluent.

Spectinomycin is an aminocyclitol antibiotic active *in vitro* against most strains of *Neisseria gonorrhoeae* (MIC 7.5 to 20 mcg/ml). Definitive *in vitro* studies have shown no cross resistance of *N. gonorrhoeae* between trobicin and penicillin.

Indications: Acute gonorrheal urethritis and proctitis in the male and acute gonorrheal cervicitis and proctitis in the female when due to susceptible strains of *N. gonorrhoeae*.

Contraindications: Contraindicated in patients previously found hypersensitive to Trobicin. Not indicated for the treatment of syphilis.

Warnings: Antibiotics used to treat gonorrhea may mask or delay the symptoms of incubating syphilis. Patients should be carefully examined and monthly serological follow-up for at least 12 months should be instituted if the diagnosis of syphilis is suspected.

Safety for use in infants, children and pregnant women has not been established.

Precautions: The usual precautions should be observed with atopic individuals. Clinical effectiveness should be monitored to detect evidence of development of resistance of *N. gonorrhoeae*.

Adverse reactions: The following reactions were observed during the single-dose clinical trials: soreness at the injection site, urticaria, dizziness, nausea, chills, fever and insomnia.

During multiple-dose subchronic tolerance studies in normal human volunteers, the following were noted: a decrease in hemoglobin, hematocrit and creatinine clearance; elevation of alkaline phosphatase, BUN and SGPT. In single and multiple-dose studies in normal volunteers, a reduction in urine output was noted. Extensive renal function studies demonstrated no consistent changes indicative of renal toxicity.

Dosage and administration: Keep at 25°C and use within 24 hours after reconstitution with diluent.

Male—single 2 gram dose (5 ml) intramuscularly. Patients with gonorrheal proctitis and patients being re-treated after failure of previous antibiotic therapy should receive 4 grams (10 ml). In geographic areas where antibiotic re-

sistance is known to be prevalent, initial treatment with 4 grams (10 ml) intramuscularly is preferred.

Female—single 4 gram dose (10 ml) intramuscularly.

How supplied: Vials, 2 and 4 grams — with ampoule of Bacteriostatic Water for Injection with Benzyl Alcohol 0.9% w/v. Reconstitution yields 5 and 10 ml respectively with a concentration of spectinomycin dihydrochloride pentahydrate equivalent to 400 mg spectinomycin per ml. For intramuscular use only.

Susceptibility Powder—for testing *in vitro* susceptibility of *N. gonorrhoeae*.

Human pharmacology: Rapidly absorbed after intramuscular injection. A two-gram injection produces peak serum concentrations averaging about 100 mcg/ml at one hour with 15 mcg/ml at 8 hours. A four-gram injection produces peak serum concentrations averaging 160 mcg/ml at two hours with 31 mcg/ml at 8 hours.

For additional product information, see your Upjohn representative or consult the package insert.

MED-B-1-S (LWB)

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The Upjohn Company, Kalamazoo, Michigan 49001

CYNTHIA J. CUNNINGHAM, FRANCIS R. WATSON, Ph.D.,
JOHN S. SPRATT, JR., M.D., M.S.P.H. and ROBERT C. HAHN, *Columbia*

Behavioral Sciences and Cancer

A Review

THE STAFFS at Ellis Fischel State Cancer Hospital (EFSCCH) and the Cancer Research Center (CRC) recognize an unfilled need in the provision of mental health services to persons who may or do have cancer and to the people who interact with these persons. Emotional problems arise from apprehension, the protracted treatment and restriction of activity associated with any chronic disease and altered bodily function. Much of this mental anguish is unnecessary since it is a by-product of misinformation and motivation. A planned educational approach utilizing behavioral science techniques can induce a change in attitude to relieve the source of anguish. Other approaches must be developed for inpatients who actually are in a preterminal state. The total problem goes well beyond our community at EFSCCH and CRC since the psychological problems peculiar to cancer have not been systematically studied and corrected with an ongoing program in any environment.

REVIEW OF THE LITERATURE

From a review of contemporary literature on the psychological problems of cancer patients, we have documented that a behavioral science group at EFSCCH and the CRC could make a major contribution to the various publics in this community.

Response to Symptoms

Confronted with symptoms which may indicate cancer, individuals often delay seeking medical advice. This problem is of major importance since it affects the disease's entire course.

One cause of delay is ignorance about the disease which spotty public education has attempted to correct. However, studies have shown that even those who "know" procrastinate. There is evidence that emotional factors, notably fear, may play an even greater role than ignorance.¹⁻⁵

Fear may result in immediate action, but more often it leads to a half-conscious policy of con-

cealment and rationalization. Defense mechanisms—avoidance, suppression, denial—are necessary for the mind to cope with a serious problem such as cancer, but they can become overpowering and self-destructive.^{2-4, 6-8} Because people are influenced by those around them, the attitude that cancer implies a stigma, expressed by family or friends, may delay action. A lack of information about community services available to residents in distress also may contribute to delay. People naturally question why they have cancer; when no scientific answer is available, they make up reasons creating stress and sometimes barriers to necessary action.^{9, 10}

Variation in response to symptoms also may be attributed to the Weber-Fechner law which states that the response of animals (including man) to any stimulus varies according to the magnitude of the stimulus. How much an individual's sensitivity to the presence of cancer symptoms can be increased through education is not really known. For certain anatomical sites, it probably cannot be increased at all, and early diagnosis will have to depend on early detection in the asymptomatic state.¹¹

Families are subject to the same fantasies and fears regarding cancer as is the patient.¹² Feelings of guilt experienced by parents when the patient is a child may be a deterrent to action.⁷

These studies reveal no certain way of predicting people's readiness to report cancer symptoms. Each person will react in his own way according to his values and beliefs regarding illness in general and cancer in particular and the situation in which he finds himself at the time. However, it is logical to attempt to reduce undue anxieties of hopelessness that can lead to such fear or denial of having cancer that self-neglect results. Delay, ignorance and fear have been called the allies of cancer, and education is important in the fight against them.¹³ However, those who respond to publicity are often complaint- (and cancer-) free, while those with symptoms requiring attention are dominated by

their irrational fears. The general conclusion is that education utilizing only a rational appeal is insufficient. New techniques must be developed which will modify emotional attitudes.¹⁴ There is a strong indication that a means of open communication is needed for the patient and his family to express their feelings about cancer on an individual basis.^{4, 6, 7, 10, 15}

The greatest delay occurs before a patient first consults a physician, but there can be a noteworthy delay after first consultation. The situation exists whereby anxious patients seek reassurance about symptoms and later use an initial optimistic opinion to avoid further consultation despite progressive symptoms.³ In many instances, the physician concentrates on his view of the patient and not the patient's view of himself. The "unscientific" beliefs expressed by patients about themselves can prove to be particularly useful in deciphering the complexities of their emotions and behavior.¹⁶ Studies also indicate that to some extent physicians share in patients' fear of cancer as a dreadful, incurable disease and react with feelings of shame or helplessness in the face of it. This reaction can bring only despair and reinforce the anxieties which keep cancer patients out of the doctor's office. Emotional reeducation must be directed toward physicians as well.^{14, 16}

Response to Diagnosis

The response of the patient, his family and his associates to the diagnosis of cancer is a complex problem. We presently have no systematic studies for predicting this response or for molding it to be psychologically nondetrimental to the patient.

Patients' behavioral patterns are affected by the level of awareness they have about their illness. Numerous variables in this area require more detailed study in specific patient populations.⁸

Illness is a social as well as a biological phenomenon. Adaptive techniques in many social and cultural subgroups are similar, but the rules of expression and communication vary significantly. The climate created by the physician greatly influences this expression. Understanding how each patient feels about his disease, how he communicates, how he is trying to cope with this threat to his ego and integrity requires study and planning. It is possible to derive a rational approach to the individual care of the individual patient. All patients have some awareness, so the central question is no longer one of "telling the truth." A patient's anxiety, no matter what

Recognizing that cancer patients and those with whom they interact have a need for mental health services that has not been filled, the authors review the literature establishing this fact. They believe that a specialized mental health center and behavioral science research unit within the Cancer Research Center would be a vital resource for studying the complex behavioral science problems presented by the development and management of cancer. Resulting specialized knowledge could be diffused throughout the health profession of the state through consultative and continuing education programs. Miss Cunningham is Administrative Assistant, Office of Research and Doctor Watson is Chairman, Department of Biomathematics at the Cancer Research Center. Doctor Spratt is Director of the Cancer Research Center and Chief Surgeon at Ellis Fischel State Cancer Hospital. Mr. Hahn is Assistant Librarian at the Center and Hospital. This work was supported in part by General Research Support Grant # FR-05618-05.

he professes not to know, is manifested in his obsessive observation of staff and procedures. There is no place for surprise or inconsistency.

Upon diagnosis of any chronic illness, but especially cancer, the greatest threat to the patient seems to be the possibility of pain, helplessness, rejection and progressive isolation.¹⁷ This is feared more than death itself. The cancer patient obviously uses many denial mechanisms to cope with this threat, but, at best, denial is a poor avenue for emotional discharge. The relationship between patient and physician is crucial for the patient's peace of mind. Understanding this dependent relationship and developing a method of coping with it are quite important.¹⁸

The psychological dynamics are so complex in the presence of cancer that different family members may also have highly varied reaction patterns.¹⁹ A frequent turnover of personnel in a clinical environment creates problems for both patient and family. Warm personal relations are definitely necessary.

The response to diagnosis is also affected by the type of cancer and the patient's attitudes toward various treatment methods. Some cancer sites have a greater emotional impact than others largely because of erroneous attitudes held by

the patient or imparted by health professionals not adequately trained in cancer patient care.

Response to Treatment

Because of most people's concept of cancer as an incurable disease, "the diagnosis 'cancer' is one of the shockers among life stresses to any person."²⁰ This stereotype is particularly unfortunate since cancer is probably the most curable of all chronic diseases, and even when cure is not possible, protracted periods of symptom-free survival can be obtained. Furthermore, an increasing accumulation of well monitored clinical data makes it possible for the physician to speak with greater assurance about probable outcome. In many instances, this knowledge properly transmitted to patient and family can help reduce anxiety and uncertainty. Although hospitals which treat cancer patients offer no more psychological guidance to these patients than is generally offered to other types of patients, it should not be believed that cancer patients are not more in need of this service than others. "The idea, 'I have cancer,' almost invariably has a violently disruptive effect on the personality."¹⁸

The psychological problems of the cancer patient are probably most dramatic immediately before and after treatment while he is hospitalized. With considerable time alone to reflect on his condition, he imagines various outcomes which may or may not be realistic. During this stage, one must communicate with care regarding the treatment process. Terms frequently used by the medical profession to indicate routine procedures may very well have another connotation for the patient. For example, the term "radical surgery" indicates a dangerous and destructive procedure difficult to associate with good health. "Definitive surgery" would be a less traumatic term.²¹

None of the studies we have reviewed has regarded this problem of communicating the method of treatment to the patient, what it may indicate to him and what emotional trauma or problems it may cause. Rather, it is generally assumed that the patient is able to take this in stride. If the physician is not particularly harassed or otherwise encumbered by the patient's emotional reaction, he generally assumes that the patient has withstood this psychological assault with equanimity and maturity. Whether or not these assumptions are true has yet to be tested. Indeed, it is not reasonable to suspect that cancer patients' communications can be interpreted in the same way as those of noncancer patients.²²

How these communication patterns change during the course of the disease is as yet unknown and needs considerable study. This problem will not be resolved by cursory examination, but rather by in-depth study and continual evaluation and research.²³

Furthermore, we frequently consider the normal individual to be more concerned about survival than maintaining a body part. However, this is not always true. Because of his self-image, a person may fear mutilation or deformity much more than he fears death.⁹ In such a situation, the patient must learn to adapt to a new life style, one which in the past has been completely foreign to him and, in some ways, devoid of all values which had previously sustained him. This continual process of adapting to new conditions must necessarily take place over time, reflecting the chronological sequence of the treatment effects and the patient's emotional problems in accepting new values and making other adjustments to everyday living.²⁴

Beyond the realm of psychological and psychiatric problems, real physical pain must be considered. Pain is a peculiarly subjective phenomenon, which is individual to each patient. Many treatments are given because they are palliative. Some treatments are given because they are considered to be less painful in a physical sense than other equally effective treatments. However, the measurement of pain is left to the physician's subjective interpretation with no objective scale. Experienced doctors will be able to assess the degree of pain more readily than newly qualified doctors and nurses. The bias is not enough in favor of the patient.²³ Since the alleviation of pain is an important factor in many cancer treatment modalities, a great deal more work should be done to establish relatively objective measures of pain in order to evaluate the effectiveness of treatments.

Of all the medical personnel involved in treating cancer patients, the nurse may be the true center of attention. Although the physician assumes responsibility for the guidance and execution of treatment and the final assessment of all decisions, the nurse, in some respects, must bear a greater burden since she is the only member of the medical team who has any sustained contact with many patients.⁹

The role of various medical and paramedical personnel in the total care of cancer patients is not clearly known. Problems faced by these individuals have not been considered in a systematized or formal fashion so that each must develop solutions anew.²⁵

Beyond the patient and the personnel concerned with treating him is the patient's family, which is of equal or greater importance. This is especially true when the patient is a child or young adult, because the family may have greater difficulty making a psychological adjustment than the patient.¹⁹

Response to Altered Bodily Function and Rehabilitation

The patient's response to altered bodily function is critically important to his welfare and rehabilitation. All attempts should be made as soon as possible to prevent the patient from becoming involved in deep psychological problems beyond those he is capable of handling himself. Many patients tend to imagine the future without any knowledgeable reference.²¹

Some aspects of problems arising from bodily alteration are defined by the treatment method.²⁶ If treatment is by surgery, such a change can occur within several hours. The patient must be prepared to accept this altered condition before treatment begins.^{21, 24, 26-29} Rehabilitation should actually start as soon as the patient enters the hospital. A flexible plan should be based on pertinent information shared by staff members providing the patient's care.⁶ Rehabilitation demands the most careful consideration by all health team members, but the systematic study of such problems has been surprisingly sparse.
4-6, 14, 26, 28, 30, 31

From diagnosis on, the cancer patient frequently needs some psychological, supportive help. The problems which he is facing or about to face are not those normally faced in everyday life, nor are they those for which he has any great deal of preparation. The cancer patient's feelings of guilt at having this disease cause him to make heroic attempts to hide his distressed state from others.²⁵ Few people are prepared to be heroes by themselves and would be able to adjust better to their circumstances with professional help. Regression, anxiety, depression, hostility, hypochondria, counterphobia, obsession-compulsion and acute schizophrenia have all been included in the range of cancer patients' emotional reactions. These usually occur together or in series rather than separately.²⁴ The recognition and proper management of these reactions require professional guidance and skills not formally given to the medical personnel who generally come in contact with the cancer patient. These situations would be best studied by special personnel trained in psychiatry or psychology interacting with the

clinical team through consultation, collaboration, research and education.

Medical personnel could be better prepared to handle cancer patients' various reactions if improved psychological histories for each patient were available. Any reasonable prediction regarding the reaction of a patient to the loss of function he will undergo can only be made by knowing the value system and vulnerable areas of that particular patient.³² Specialized personnel must be prepared to discover the specific, indirect and/or symbolic effect of the loss on the patient to properly administer psychotherapy.³² Little information is available describing the extent to which psychological aberrations are due to the disease itself or to previous psychological conditioning. At least one author believes that cancers at certain sites will bring about certain psychological processes or aberrations.³³ Some research has been done on site-specific problems encountered by laryngectomies,²⁸ amputees,²⁹ colostomies³⁴ and mastectomies²⁶ and on patients undergoing head and neck surgery²⁶ or pelvic exenteration.³⁵ Each of these sites creates its own special rehabilitation problems, but the effect of the patient's psychological make-up and emotional support from those around him on his ability to respond and readjust needs further systematic study in a larger context.

The patient's family also should be given emotional support and understanding as soon as possible.²⁶ Regardless of specific rehabilitation problems, the family can play an important supportive role.^{1, 12, 19-21, 26, 28, 35, 36} Mediation by the health team may provide insights to help the patient and his family reach a quicker and easier readjustment.

Although it is recognized that the family and community must take interest in the psychological support of the cancer patient (indeed, community involvement is deemed essential for total rehabilitation²⁶), frequently this is not sufficient to fulfill the patient's needs. The patient who wants to discuss personal problems should be able to talk to someone who is not as emotionally involved as family and friends. There is a lack of this kind of outside help.⁴ Further, the problem may be complex enough to require professional help for the patient to gain understanding of it.

The necessary professional help may come from a psychiatrist, a psychologist, a social worker, a minister or other individuals with training in psychology or psychiatry or both. It is not sufficient to consider the patient as an

isolated entity and, therefore, discharge him because it is felt he is ready for the community. Rather, one must also look into the community and ask, "Is the community ready for him? Is his family willing and ready to accept him, considering the change that has taken place?"²⁴ Family education and ventilation of feelings must be utilized to develop and encourage a supportive environment for the patient.

The duration of problems following discharge depends not only on the patient's psychological acceptance of changes in himself but, also, on the adaptation of his friends, family and environment to him. Frequently, agencies are ready and able to meet patient and family needs but they are unaware of the patient and he is unaware of them. Patients who rely entirely on their own resources may not be obtaining adequate services and may be creating needless stress.⁴

The increased survival rate for cancer means a consequent increase in financial drain on the families affected and a necessary concern with the quality of cancer patients' survival. "The complex psychosocial and vocational problems consequent to chronic disability are not transient but are residuals for which solution must be energetically pursued."²⁹ At one time, vocational rehabilitation was not even considered until the patient had survived for two years.²⁶ Now that attitude is waning, and greater efforts are being made to begin rehabilitation as soon as possible. The patient's physical disabilities are often compounded by fears of rejection. Not only must he cope with his own doubts, but also with those of his employer and the community. Positive understanding and planning are essential to the ultimate goal of job placement for the disabled cancer patient.²⁶

Response to Incurable Cancer

At what point cancer becomes incurable is really an academic question for frequently treatment intended to be palliative may be curative.³⁷ We are unable to precisely predict the death of an individual and for this reason alone should avoid depriving the cancer patient of hope.^{23, 37, 38}

It has been stated that cancer patients' greatest fear is not that of dying, but rather the threat of pain, helplessness, rejection and progressive isolation. For many terminally ill patients, these fears are often realized. Several authors have documented the tendency of both physicians and the patient's family to avoid and reject the patient with incurable cancer.^{31, 32, 39, 40} There are many reasons for these responses. Suffice it

to say, however, it is often difficult for either the physician or the patient's family to accept the patient's eventual death. The physician must have the "maturity and security" not to abandon his patient and at this point "the art of medicine displaces the science."⁴¹

The family's dilemma is a severe one. A person responds to the serious illness or threatened death of a spouse, a parent or a child with a complex mixture of painful emotions. At the same time, the patient is making his greatest demands for nursing care and emotional support.⁴⁰ Since terminal illnesses such as cancer do put a great strain on all those involved, good psychological management is more than an adjuvant to the treatment; it may frequently be the major factor in alleviating suffering.³¹

Relatives and friends may adopt the defense mechanism of denial, which can be burdensome in a death situation. Parents displaying unusually strong denial defenses are more likely to react to death in a distressing manner.⁴²

One form of flight from the disease is suicide. Although this is more verbal than actual, the possibility exists in almost every case.⁴³ The terminally ill patient's psychological status has been found to be most important.⁴⁴ Indications of emotional disturbance in the patient emphasize the need for the staff's increased awareness of the psychological as well as physical distress of cancer patients. The dying patient must never be "written off" by a doctor (or any member of the staff). Perhaps his time can be spent in greater concentration on someone whose physical state can be improved, but his loss of interest can be felt and may help precipitate a suicidal decision.⁴⁴ Psychiatric consultations and other supportive treatments (evidence of staff interest and concern, social work activities) have been helpful in managing many patients contemplating suicide.

The emotional interactions between nurses and patients are of such importance that they can be ignored only at the patient's peril. The two most damaging emotional reactions that a nurse may display are hostility and withdrawal. Withdrawal is far more common and often more damaging.⁹ The nurse who can overcome her defensively mechanical approach to the dying patient and establish a warm emotional bond with him can provide great support.

There is a gap between theory and practice in physician management of terminal patients.⁴⁵ Many medical practitioners have not dealt adequately with their own underlying fears of

death, and the dying patient represents a threat to them. It has been suggested that the task of helping the terminally ill patient through the psychological problems of dying should be shared with psychiatrists and social workers.

Response to Preventive Measures

In addition to studying psychological ramifications of extant cancer, behavioral scientists can provide more intense research and development of motivational programs among the public to change social practices known to lead to cancer development. Research in cancer epidemiology holds more promise for cancer prevention than any other area. Variations in exposure to environmental agents and in social practices are suggested to be largely responsible for variations in the incidence of cancer among different groups of people.^{46, 47} For example, many cancers are unquestionably attributable to the contemporary diet.⁴⁸ Dietary practices can only be changed when the agricultural business, in collaboration with nutritionists, chemists, epidemiologists and food processors, see fit to reorganize the food industry to insure its economic viability while guaranteeing the people lifelong access to a scientifically planned, nutritious, noncancer-producing diet. Such a change, to be accepted by everyone concerned, will require all the talents that motivational psychologists and other behavioral scientists can muster. Only when these changes occur and are sustained for future generations can the incidence of human cancer be systematically reduced. The reduction must be monitored by epidemiologists constantly alert to the introduction of new cancer-producing factors into the human environment. Ethnic and geographic variations in cancer correlated with social and dietary practices continue to be reported, but relevant information is largely buried in journals and goes unused. The end result of all knowledge should be action.⁴⁹

CONCLUSION

The basic observation in this review is that the diagnosis, or even the suspected diagnosis, of cancer in man creates a unique and specialized community of interest with a great number of specialized, complex mental health problems. The psychological and social milieu of cancer patients is a complex subject affected by the many variables that determine human motivation and attitudes under unique circumstances. Systematic efforts should be made by behavioral

scientists working in close collaboration with physicians and other health professionals to improve the milieu in a way that will reduce mental anguish and apprehension and improve the attitudes of all participants. Organization of existing knowledge and more applied research has been called for.^{16, 50} A specialized mental health center and behavioral science research unit within the Cancer Research Center would be a vital resource for studying the complex behavioral science problems presented by the development and management of cancer. Such specialized knowledge could be diffused throughout the health profession of the state (and beyond) through consultative and continuing education programs.

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(Continued on page 904)

HMO Revisited

By

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The subject of HMO's or Health Maintenance Organizations is of current concern to all members of the medical profession, but it is not thoroughly understood. The following report was originally published in the Sept. 29, 1971 issue of St. Louis Medicine and is reprinted here by permission of that bulletin. Doctor O'Neal is President of the St. Louis Medical Society.

THE MEETING on Health Maintenance Organizations (HMO) at Busch Hall on August 20 threw a little more light on the subject. Like the blind men describing the elephant by the part each had felt, I don't believe I can define an HMO as yet because I haven't seen one, but I would like to comment on a few parts I have "touched." I am not opposed to group practice and recognize the advantages of availability and decrease in duplication which it offers. I am not opposed to prepaid medical schemes. If they function in a competitive atmosphere, they have to offer roughly the same services at roughly the same price and financial risk is spread as it would be through insurance or taxation. I am not opposed to salaries for physicians, feeling that the net incomes of independent physicians are the salaries they choose to pay themselves and can be altered by altering the time they work or their productivity. In general, salaried physicians perform well in the terms of their employment, and the plurality of opportunity works to keep career incomes adequate.

Very few physicians attended the meeting. Only a handful of the 300 or so at the meeting were physicians engaged in patient contact. The "consumer representatives" and the managers were highly visible. This is no accident, since the HMO is essentially a management concept. A fee is paid to the manager who then manages the services to be supplied. Savings can therefore be made almost by definition—the fee is set, don't spend any more than that, and contract the services to be given in the context of the prepaid fee. The advantages are cost-limitation. One disadvantage may be service-limita-

tion, particularly near the end of a fiscal year, and lack of innovation when definition of services gets fossilized in administrative rule. The manager may be a university or other medical center, an insurance company, a group of investors, a group of consumer-interests or even a group of physicians.

Much was said about contracts. The HMO manager contracts to receive the prepaid fees and contracts with hospitals, pharmacies, physicians, nursing homes, visiting nurses, chronic hospitals, mental hospitals, clinics, rehabilitation centers, and so on. One of the effects of contracts is, of course, that the contractor does a job and is paid. Another effect is that the non-contractor cannot be paid. All of this to replace the simple contract between patient and physician: You will take care of me—I will pay you. We are comforted that "dualism" would be permitted—small comfort if the funds are contracted away from the patient and the physician. We must aim toward a system of "dualism" in which the patient and his dollars can move about at the patient's direction. One cannot manage people who have a viable alternative. Will the avenues to viable alternatives be closed?

Consumerism is to effect savings. The "consumer" is supposed to be able to participate in cost-value judgements. One of the major problems with medical costs today is that the patient is abdicating his cost-value judgements and his negotiating ability to others and is being locked into high cost delivery systems. The negotiating process is already between "consumer-representatives" and "provider-representatives" (company negotiators, union business

agents, insurance executives, hospital managers) to a degree that practically excludes a patient from participating in decisions about how his dollar will be spent. If you have had a recent hospital patient without insurance, compare his attitude with that of your other patients. That is consumerism. It is dwindling rather than growing under "consumer-representatives." The patient's dollars are being spent by others without his informed consent.

The employees of HEW are in the van of the promoters of the HMO. This reflects and extends one of the most disturbing statements I have ever heard. In December, 1970, at the AMA meeting in Boston, Mr. Robert E. Patricelli, a Deputy Assistant Undersecretary of HEW said: "We are going to use our share of the health care dollar as leverage to effect changes in the health care delivery system." Who is "we" and whose is "our"? Health care costs money, and money is only produced by the efforts of those who make goods or supply services. Whether the money is paid in taxes or premiums, it only comes from these sources. The ill and disabled, if ill and disabled a long time, may pay neither taxes nor premiums. Money must be allocated for the ill and disabled and poor out of previously paid premiums or taxes or out of the premiums and taxes of the working well. The official "we," who are using the officious "our" money, are apt later to use the same logic in absolving themselves ("We have appropriated our share of the health care dollar for the Indians. Call the Commissioner of Indian Affairs.").

Mr. A. J. Henley, Manager of the Yeatman Health Center, pointed out that the HMO is essentially a way of managing the funds in a different way for the people already receiving the services. He felt that there is nothing in the HMO concept itself which would foster more care for the poor. He is right.

Profits were hinted at as "management incentives." These are to replace the present "entrepreneurial incentives." In theory, the function of the manager is to promote savings by avoiding duplication, standardizing procedures, controlling quality and using personnel appropriately. In practice, these activities are sometimes carried out. The first priority of managers frequently is to protect the managers' interest, the second is to promote and protect the enterprise's interest and the third is to carry out the enterprise functions. The business of health becomes business and not health care. The hint of profits is enough to whet the interest of some fund-

poor enterprises (medical schools, hospitals). Can a medical school be borne on the backs of a group of patients? Not likely, unless the university-based HMO is funded at a per capita level higher than a nonuniversity based HMO or unless the funds intended for patient's services go to other than health care functions. The Russians with their medical schools, polyclinics and research centers separately funded and separately administered do it better. Should academe compete in the market place?

Preventive care was emphasized as if it were a novelty that only an HMO could furnish. Dr. William Scrivner eloquently outlined many of the preventive measures that obstetricians daily employ in their ordinary care of their patients. The need is for more people to get the same kind of care. Cost and cost-value in the preventive sector of medicine were discussed. Prevention is to spare the need for "crisis medicine." Many misunderstandings intrude in this area. The cost-value ratio is highly satisfactory in both monetary and humanistic terms, for instance, for the money given Dr. Salk. The cost-value ratio must be less satisfactory for multiphasic screening. Many at the meeting seemed to think of cost in terms of dollars and value in humanistic terms. The manager will find this impossible ratio to be as indivisible as we have found it.

There was a general attitude of "great big HMO in the sky." Some of the questioners from the floor clearly felt that doctors, hospitals, ambulances, appliances manufacturers and pharmacies would all be held in line, but thought they, as "consumers," would be allowed to pick and choose as they desired and found appropriate. The essential feature of the HMO is that the patient's services are managed by the manager. The professional "provider" contracts with the manager, so his role and his pay are defined during the term of his contract. But the patient's services are managed.

Planning money or organized HMO's is to be forthcoming. The planners are ready to receive it.

The physician who contracts with the HMO will depend on the HMO manager for his working conditions, future contracts, work assignments, advancement and associations. He will be judged on how he performs in the management view, rather than in the view of the manager's client—the patient. The interests of patient, manager and physician will sometimes coincide.

The manager will be presented with the im-

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possible equations which harry our thoughts: How many hernias can you repair for the cost of a kidney transplant? How many inoculations for the cost of a pancreatectomy? Is this treatment worth it? Shall we try? Shall we not try? Accountants can handle this sort of thing with ease. The last of the practicing humanists, the physicians, can retreat behind the manager and his figures.

OVERLOOK

The restlessness with the current medical scene is largely caused by absent or inadequate care for the poor and by the high cost of some illnesses. The HMO is a management concept which would alter the way current dollars are being spent, with little prospect of making available additional care for the poor, of covering the catastrophic costs of care for others. All this would be at the expense of great upheaval and dimly foreseen consequences, but hope of dollar saving.

Behavioral Sciences

(Continued from page 901)

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Three MSMA Councilor Districts Hold Meetings in October



(Left to right) MSMA President Gerald L. Miller and Third District Councilor Max S. Franklin question Alan Bloom of the Department of Health, Education and Welfare about HMO's. Dr. Lawrence O'Neal, President of St. Louis Medical Society, watches the group with interest.



Fourth District Leaders pose for Cameraman Royal O. Cooper. (Left to right) President Falls B. Hershey, St. Louis County Medical Society; Fourth District Councilor Louis P. Hetlage; and President Roman E. Hammes of St. Charles-Lincoln County Medical Society.

Fourth District

The federal administration's viewpoint on Health Maintenance Organizations and important problems now facing organized medicine were among the subjects discussed at the MSMA Fourth Councilor District meeting at Three Flags Restaurant in St. Charles on October 6.

Alan Bloom, special assistant in the Office for Group Practice Development, Department of Health, Education and Welfare, discussed the first subject as principal speaker at the dinner. He explained the federal administration's plans for a voluntary system of improving the delivery of medical health care by centralizing some service under a locally-operated Health Maintenance Organization (HMO), explaining how the HMO would affect both the provider and the

consumer.

Dr. Gerald L. Miller, President of the Missouri State Medical Association, commented on problems facing organized medicine and the MSMA and gave a status report on the Health Care Foundation of Missouri.

The meeting, hosted by Fourth District Councilor Louis P. Hetlage of Troy, was well attended. Special guests included Dr. Max S. Franklin, Third District Councilor, and Mrs. Franklin; Mrs. Frank J. Valach, President of the MSMA Woman's Auxiliary, and Doctor Valach; Dr. Lawrence W. O'Neal, President of St. Louis Medical Society, and Mrs. O'Neal; and MSMA Executive Secretary Ray McIntyre and Mrs. McIntyre.



(Left to right) Mrs. Louis P. Hetlage, Dr. Falls B. Hershey, Mrs. Frank J. Valach, Doctor Hetlage, Mr. Alan Bloom, Dr. Lawrence O'Neal and Doctor Valach.

Sixth District



Senator Ike Skelton of Lexington (*left*) was a guest and Senator William J. Cason of Clinton was a featured speaker at the Sixth Council District meeting.



Councilor William D. Bradshaw of Clinton (*left*), host for the meeting, confers with Dr. Stanley S. Peterson of Springfield, MSMA Delegate to the American Medical Association.

Senator William J. Cason of Clinton shared the rostrum with Dr. Stanley S. Peterson at the MSMA's Sixth Councilor District meeting at Holiday Inn in Warrensburg on October 27.

Senator Cason, who represents Missouri's 31st District and is Majority Floor Leader of the Missouri Senate, emphasized the need for all physicians to become involved in political activity. He cited the great increase in state and national legislation now affecting medicine as the major requisite for their personal interest and participation and encouraged Missouri's physicians to inform themselves of all pending legislation and to advise their legislators regarding it.

Doctor Peterson, who is a MSMA Delegate to the American Medical Association, discussed the operations of the AMA. He stressed the importance of the AMA as the only representative of the individual physician on the national scene and discussed reasons why all physicians should be members.

Senator Ike Skelton of Lexington, Senator from Missouri's 28th District, also was a guest at the meeting.

Dr. William D. Bradshaw of Clinton, Councilor for the Sixth District, arranged the meeting and served as host.

Ninth District

Approximately 40 physicians and their wives from a 14-county area in South Central Missouri attended the Ninth Councilor District meeting of the Missouri State Medical Association at the Tower Motel in Salem on October 20.

Dr. E. A. Stricker, Councilor for the District and host for the meeting, served as master of ceremonies at the dinner.

MSMA President Gerald L. Miller of Kansas City paid his official visit to the District and spoke to the group in regard to current problems facing the Medical Association.

Hector W. Benoit, Jr., Chairman of the Board of Directors of the Health Care Foundation of Missouri, also appeared on the program. Doctor Benoit discussed the Foundation and the operation of the peer review program in Missouri.



(*Left to right*) MSMA President Gerald L. Miller, Mrs. E. A. Stricker of St. James, Guest Speaker Hector W. Benoit, Jr. and Mrs. Martin M. Hart of Salem. (Doctor Hart is President of Mid-Missouri County Medical Society.)

The Council Reports

Meeting of September 18, 19, 1971

E. A. Stricker, M.D., St. James, Chairman, called the meeting to order. Those present were Drs. Stricker; John N. Martin, St. Joseph; Lysle M. Bach, Hannibal; Max S. Franklin, St. Louis; Louis P. Hetlage, Troy; James C. Cope, Columbia; Wm. D. Bradshaw, Clinton; R. Allen Chandler, Kansas City; Howard J. McAlhany, Springfield; Eugene T. Hansbrough, Poplar Bluff; Gerald L. Miller, Kansas City; Walter T. Gunn, St. Louis; Charles R. Gulick, St. Louis; John I. Matthews, Jefferson City; Joseph L. Fisher, St. Joseph; Stanley S. Peterson, Springfield; Arthur W. Neilson, St. Louis; Hector W. Benoit, Jr., Kansas City; Richard P. Bowles, Liberty; Paul R. Young, Columbia; Robert Kelley, St. Louis; Daniel L. Yancey, Springfield; Joseph Finnegan, St. Louis; Lawrence O'Neal, St. Louis; Wm. D. Mayer and Wm. C. Allen, Columbia; Robert H. Felix and M. Kenton King, St. Louis; Richardson K. Noback, Kansas City; Messrs. John W. Noble, Kennett; James Hughes, St. Louis; Tim Norbeck, St. Louis; Allen D. Smith, Kansas City; Gary L. Schnedler, Springfield; Hollister S. Smith, and Wm. Lindsley, St. Louis, Ray McIntyre, Tom P. Fox, Bob Carroll and Royal O. Cooper, Staff.

COMMISSION ON MEDICAL-LEGAL AFFAIRS

Dr. Daniel Yancey, Chairman of the Commission on Medical-Legal Affairs, gave the following report. He indicated that the Commission, with approval of the Council, conducted a survey of MSMA members regarding their present malpractice insurance. After a copy of the survey results was distributed to the Council, Dr. Yancey gave a brief run-down of these results. Approximately 4,100 questionnaires were mailed and 1,891 were returned. Since some of the returns represented group practice, it was estimated there was approximately a 50% return. Dr. Yancey stated that he felt this return will give the Commission guidelines with which to work. In those questionnaires returned, 97.6% of the physicians stated they were covered by some type of liability insurance. Most of the physicians indicated no problems with their current carrier. Among problems with their carriers, the most prevalent was a continual premium increase.

The questionnaire also asked for suggestions regarding what can be done about the professional liability insurance cost problems. Various types of answers were received. Dr. Yancey stated that he felt this survey indicated that the physicians of Missouri have a very good rate and it is difficult to understand why the premiums continue to increase. He said that during last year, there was a substantial increase.

Dr. Yancey reported that his Commission met on August 29, 1971 at the Columbia Inn and results of the above-mentioned survey were discussed.

The Commission also discussed the recently-developed AMA Professional Liability Program, which is a coordinated effort by the AMA, CNA and Marsh-McLennan Insurance. Within 90 days, an informational

booklet regarding this program should be available. Dr. Yancey indicated that his Commission will study this professional liability program further when the information is available and appointed a committee to meet with Marsh-McLennan and representatives of CNA and to report back to the Commission.

Dr. Yancey presented 28 suggestions on malpractice prophylaxis prepared by the Oklahoma State Medical Association. These suggestions had been presented to his Commission previously and the Commission recommends to the Council that this Malpractice Prophylaxis, along with the results of the Professional Liability Survey, be mailed to all members of the Association. Dr. Yancey indicated that his Commission did not feel the Journal is the source for this distribution.

The Commission also discussed a resolution passed by the MSMA House of Delegates regarding the "Medical Examiner System for Missouri." The House felt that a program for the entire state might be too costly and that a pilot medical examiner act be considered. The Medical-Legal Commission of MSMA and a similar committee of the Missouri Bar Association will meet in Columbia in November to discuss a pilot program. It is hoped that it can be presented in a form that can be passed in the next Legislature. Dr. Yancey said he hoped that the Councilors and Officers present will attend that meeting.

During the Commission meeting, Dr. Ford discussed the possibility of the MSMA preparing a medical newsletter similar to the AMA's, "The Citation," which could present briefs of Missouri malpractice cases of interest. The Commission recommends to the Council that this matter be given further study and implemented for the benefit of MSMA members, if possible.

Discussion followed regarding Dr. Yancey's presentation. Dr. Felix stated that he felt the Malpractice Prophylaxis article was so good that it should be made available to all senior medical students in the state. Dr. Fisher recommended that this be incorporated in the orientation program for new members. After further discussion, on motion Dr. Matthews, duly seconded, it was agreed that a copy of the Malpractice Prophylaxis should be distributed to every senior medical student in the state and every new member in the State Association for five years. It was suggested that at the end of that period of time, a decision could be made as to whether or not it then should be continued.

On motion, duly seconded, the report of the Commission on Medical-Legal Affairs was accepted with commendation.

REPORT OF THE EXECUTIVE SECRETARY

Mr. McIntyre reported that Dr. Richard Sutter, who been appointed to the 12-man National Advisory Committee on Occupational Safety and Health, is the only physician on the Committee.

Mr. McIntyre stated that the MSMA recently reached

an understanding with the IRS regarding taxes on *MISSOURI MEDICINE* advertising for the year 1968-1969. He said that MSMA also recently received a letter from IRS indicating that our tax exempt status is still intact and will continue.

Mr. McIntyre reported that President Nixon spoke at the June meeting of the AMA. The MSMA, in cooperation with the metropolitan medical societies, placed full-page ads in the *St. Louis Globe-Democrat* and the *Kansas City Star* accepting the President's challenge. The ad also was published in *MISSOURI MEDICINE*.

Mr. McIntyre then asked Mr. Carroll to discuss items regarding the Journal. Mr. Carroll asked the Council if anyone had received any comments regarding the change on the cover of *MISSOURI MEDICINE* calling attention to certain articles within the Journal.

He called the Council's attention to the expense involved in printing the full Council minutes in the Journal. He suggested that these might be presented in a condensed form covering the highlights of the meeting. Discussion followed. It was indicated that many physicians do read the Council minutes. On motion of Dr. Hetlage, duly seconded, it was agreed that we continue to publish the full Council minutes in the Journal, along with a condensed version covering the highlights of each meeting.

Mr. McIntyre then called on Mr. Cooper for remarks regarding the AMA Regional Conference on Health Quackery in Chicago on Aug. 6, 1971 which was attended by Mr. Cooper and Dr. Matthews. Opening remarks were made by Dr. Howard. Mr. Cooper reported that many types of health quackery were discussed. Tony, the Filipino psychic surgeon, is still performing in the Philippines. Meetings are being held in this country to obtain patients. Scientology, including Silva mind control and Alpha waves, was explained briefly. Medi-hair was another form of quackery which was discussed. This is a procedure for implanting wire in the scalp and attaching hair to the wires. There also is a new group of mental health quacks. Regional Therapy or foot tickling was discussed. This cult believes that all organs are connected by some mechanism to the sole of the foot and that diseases can be cured by gently palpating various areas of the sole. Many new attempts are being made to place hypnosis in some of the state medical practice acts.

Mr. Cooper reported that time was spent discussing chiropractic. Some states are introducing legislation requiring applicants for chiropractic licensure to have graduated from a school accredited by an accrediting agency recognized and approved by the National Commission on Accrediting and the Commission of Education, Department of HEW.

Mr. Carroll gave a report on the AMA Communications Clinic held in Chicago on Aug. 16-17, 1971. This meeting was attended by Drs. Miller, Gunn, Richard Bowles and Mr. Carroll. A complete report of this Clinic appears in the October issue of *MISSOURI MEDICINE*.

Mr. McIntyre indicated that Dr. Domke had appeared before the Council at their last meeting and had discussed a coordinating committee to work on physician placement. This coordinating committee has been set up with Dr. Domke as Chairman, and several meetings have been held with Mr. McIntyre and Mr. Cooper attending.

On motion, duly seconded, the report of the Secretary was approved.

REPORT OF THE TREASURER

Dr. Gulick, MSMA Treasurer, gave a brief report on the financial standing of the Association, copies of which were distributed to the Council and Officers. He stated that the Association is in good financial condition at the present time. On motion of Dr. Miller, duly seconded, the report of the Treasurer was approved.

MISSOURI STATE MEDICAL FOUNDATION

Dr. Franklin reported that a mail poll had been taken of the Board of Trustees of the Missouri State Medical Foundation regarding changing the present insurance program from Occidental Life Insurance Company to a program of self-insurance. The Board favored this change. This would mean discontinuing the coverage now purchased from Occidental and assuming financial responsibility for loans not repaid due to death of any student. Dr. Franklin stated that during the past 11 year, only two claims have been filed for a total of \$1,100. Premium cost saving would be approximately \$2,200 per year. Upon consulting our attorney, it was learned that no legal responsibility is involved, but felt MSMF has a moral responsibility to notify all students who have borrowed in the past and have loans outstanding.

Following a brief discussion, Dr. Franklin moved that the Council approve the action of the MSMF Board of Trustees to cancel the insurance coverage with Occidental and to self-insure the loans. Motion was duly seconded and carried.

COMMITTEE ON LEGISLATIVE AFFAIRS

Dr. Matthews, Chairman of the Committee on Legislative Affairs, gave the following report. He stated that his Committee met on September 17. Discussion was held regarding a revision of the Nurse Practice Act in Missouri, as it affects R.N.'s and L.P.N.'s, which is currently being considered by the nursing organizations. The Legislative Committee plans to study the proposed legislation before the next Council Meeting. Dr. Matthews recommended that all members of the Council read the proposed legislation and become acquainted with it.

Dr. Matthews reported that MSMA has been approached regarding support for proposed legislation regarding a state loan fund for Missouri students in the health field. This would not require students practice in the state. The Legislative Committee discussed this at length and agreed to support this type of legislation. Brief discussion followed. It was pointed out by Dr. Matthews that this fund would be for students at any one of the medical schools or osteopathic schools in Missouri. It would virtually be a revolving fund and would cost the state only the interest involved.

On motion of Dr. Cope, seconded by Dr. Miller, it was agreed that this be endorsed in principle.

Dr. Matthews reported that the MSMA has been approached regarding participation in voter registration. He indicated that such participation probably would involve supporting enabling legislation regarding voter registration. He stated that his Committee would like some expression from the Council as to whether this should be pursued further.



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1. Latiolais, C. J., and Berry, C. C.: Misuse of Prescription Medications by Outpatients, *Drug Intelligence & Clin. Pharm.* 3:270-7, 1969.

TEST	HYPOTHYROID	SYNTHROID THERAPEUTIC NORMAL
P.B.I.	Less than 4 mcg %	6-10 mcg %
T ₄ By Column	Less than 3 mcg %	7-9 mcg %
T ₃ (Resin)	Less than 25%	27-35%
T ₃ (Red Cell)	Less than 11%	11.5-18%
Free Thyroxine	Less than 0.7 nanograms %	0.7-2.5 nanograms %
Murphy-Pattee	Less than 2.9 mcg %	4-11 mcg %

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CYTOMEL (Sodium liothyronine) Synthetic T ₃	EUTHROID** (Liotrix) Synthetic T ₃ -T ₄	THYROLAR*** (Liotrix) Synthetic T ₃ -T ₄	Desiccated (Thyroid, USP) Cow, sheep or hog thyroid	PROLOID (thyroglobulin) Frozen hog thyroid	SYNTHROID (Sodium levothyroxine) Synthetic T ₄
Unscored 5 mcg.	N.A.	N.A.	unscored ¼ gr.	¼ gr.	0.025 mg.
N.A.	½	½	unscored ½ gr.	½ gr.	0.05 mg.
25 mcg.	1	1	unscored 1 gr.	1 gr.	0.1 mg.
N.A.	N.A.	N.A.	N.A.	1½ gr.	0.15 mg.
50 mcg.	2	2	unscored 2 gr.	2 gr.	0.2 mg.
N.A.	3	3	unscored 3 gr.	3 gr.	0.3 mg.
N.A.	N.A.	N.A.	unscored 5 gr.	5 gr.	0.5 mg.
N.A.	N.A.	N.A.	N.A.	N.A.	Injectable 500 mcg.

N.A. = Not Available Commercially

*Equivalents shown are chemical, and do not take into consideration individual patient variables. Clinical effect is approximate and should be monitored when converting a patient to SYNTHROID. This is particularly important in patients previously on desiccated thyroid. In these patients, lower doses of SYNTHROID may produce the same metabolic effect.

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Precautions: As with other thyroid preparations, an overdosage may cause diarrhea or cramps, nervousness, tremors, tachycardia, vomiting and continued weight loss. These effects may begin after four or five days or may not become apparent for one to three weeks. Patients receiving the drug should be observed closely for signs of thyrotoxicosis. If indications of overdosage appear, discontinue medication for 2-6 days, then resume at a lower dosage level. In patients with diabetes mellitus, careful observations should be made for changes in insulin or other antidiabetic drug dosage requirements. If hypothyroidism is accompanied by adrenal insufficiency, as Addison's Disease (chronic subcortical insufficiency), Simmonds's Disease (panhypopituitarism) or Cushing's syndrome (hyperadrenalism), these dysfunctions must be corrected prior to and during SYNTHROID (sodium levothyroxine) administration. The drug should be administered with caution to patients with cardiovascular disease; development of chest pains or other aggravations of cardiovascular disease requires a reduction in dosage.

Contraindications: Thyrotoxicosis, acute myocardial infarction. **Side effects:** The effects of SYNTHROID (sodium levothyroxine) therapy are slow in being manifested. Side effects, when they do occur, are secondary to increased rates of body metabolism; sweating, heart palpitations with or without pain, leg cramps, and weight loss. Diarrhea, vomiting, and nervousness have also been observed. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. Careful observation of the patient during the beginning of any thyroid therapy will alert the physician to any untoward effects.

In most cases with side effects, a reduction of dosage followed by a more gradual adjustment upward will result in a more accurate indication of the patient's dosage requirements without the appearance of side effects.

Dosage and Administration: The activity of a 0.1 mg. SYNTHROID (sodium levothyroxine) TABLET is equivalent to approximately one grain thyroid, U.S.P. Administer SYNTHROID tablets as a single daily dose, preferably after breakfast. In hypothyroidism without myxedema, the usual initial adult dose is 0.1 mg. daily, and may be increased by 0.1 mg. every 30 days until proper metabolic balance is attained. Clinical evaluation should be made monthly and PBI measurements about every 90 days. Final maintenance dosage will usually range from 0.2-0.4 mg. daily. In adult myxedema, starting dose should be 0.025 mg. daily. The dose may be increased to 0.05 mg. after two weeks and to 0.1 mg. at the end of a second two weeks. The daily dose may be further increased at two-month intervals by 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg. daily).

Supplied: Tablets: 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded, in bottles of 100, 500, and 1000. Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, N.F., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent. SYNTHROID (sodium levothyroxine) for Injection may be administered intravenously utilizing 200-400 mcg. of a solution containing 100 mcg. per ml. If significant improvement is not shown the following day, a repeat injection of 100-200 mcg. may be given.

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Following a brief discussion, Dr. Bradshaw moved that this particular matter, voter registration, be pursued as a study. Motion was seconded by Dr. Miller and carried.

Dr. Matthews said that several other matters were discussed regarding future legislation.

On motion of Dr. Martin, duly seconded, the report of the Committee on Legislative Affairs was accepted with commendation.

PRESIDENT, MISSOURI MEDICAL SERVICE

Mr. McIntyre introduced Mr. James Hughes. Mr. Hughes is the recently-appointed President of Missouri Medical Service (St. Louis Blue Shield).

Mr. Hughes indicated his pleasure in being able to attend the meeting and gave a few brief remarks regarding his background with the Blues. He stated that it will be his honest effort to improve Blue Shield programs in this state in cooperation with Blue Shield of Kansas City and to work with other Blue Shield Plans throughout the country. Mr. Hughes asked the Council for its cooperation and stated he would welcome any constructive criticism.

REMARKS OF THE PRESIDENT

Dr. Miller thanked Dr. Gunn for a lovely day on Friday and made the following remarks. "I would like to talk to you about several thoughts that I consider quite important. I would refer first to a comment made by Dr. Matthews. I am not personally secure that we as physicians in the existing pluralistic health care delivery system are not in jeopardy. A total change of the health care delivery system can do devastating things to the health of our people (patients) as well as to the physicians as providers. A senator very recently, in speaking to a medical community, alluded to the fact that there is going to have to be, by necessity, a tremendous amount of statesmanship manifested in Washington if we are to avoid total governmental dominated medical programs with perhaps unneeded NHI and destruction of the existing superior health care system.

"American medicine has come a long way in its political awareness. Due credit must be given to AMPAC with its impact in Washington and locally, as well. Medicine must participate in politics with time and money if we are going to avoid a major revolution in the health care delivery system.

"Criticism is a real part of our social structure. Medicine is not alone in its magnetism for criticism. I ask that you take a look at the plight of the railroads, schools, churches, unions and politicians. Criticism of health care today is attended by something much more ominous, however, with the threat to replace a system which is the product of decades of progress with something unknown, but socialistic.

"I ask you to sit down, identify some of our current existing problems. What in the existing system is in trouble? A. Cost—We as physicians receive about 15¢ of the health care dollar for services. Factors beyond the control of the physicians have largely been responsible for increased costs. We, as physicians, must sit down and look practically at this problem for we are not without blame, and we must identify the problem. We must accept this responsibility and look for the immediate solution relative to costs. I ask you to look for a moment at those things which have had impact on

the rising cost of medical care, they are: (1) Significant increase of health services which are available to the people (by law); (2) Technical advances; (3) Population increase; (4) Sky-rocketing medical liability insurance; (5) Inflation; and (6) Labor. Is this system worth fighting for? The same physicians under any system are going to be rendering the service.

"B. The other issue under attack is the unavailability of health care. Surely without a revolution within the social system, without socialized medicine, these problems can be identified and corrected within the existing health care delivery system, so that we may avoid destroying something as great as American Medicine.

"Take a hard look at other health care delivery systems—England, France, Germany and the proposed HMO's. HMO's are not well defined—I want them identified and tested thoroughly in different geographic settings. What impact will come from HMO's? Cost, quality and effect on people and physicians. This is a mechanism the administration is suggesting in lieu of the Kennedy proposal. However, in due time, the total regimentation of physicians thru HMO's becomes a group of physicians without voice and completely socialized.

"Since 1965—Medicare then Medicaid—Federal programs with a record of inadequate funds, pegged or prorated fees for service, over and under utilization and a quagmire of confused regulations from ill-informed bureaucratic lay people. I cannot see anything else—HMO's should be given a careful, well defined study with total audit before we submit approval and abandonment of the current system.

"I think the issues are very simple. A group of our well-educated sophisticated physicians are giving more time to fewer people and with fewer primary care physicians, the unavailability of patient care is not just confined to rural or ghetto areas. If we are to take action to preserve the current system, we must answer these charges having defined the problems and with proposals for their solution. Then, we have to go to work. I really think we are in some jeopardy. In the Philippines, one half of the physicians are doing menial tasks. A few years ago, teachers were in demand everywhere and now we have teachers who can't get a job. In the 60's, engineers went thru similar dismaying problems. I am not against HMO's if it can be demonstrated they are effective delivery mechanisms. However, let us insist that pilot studies be done so that we can be assured that HMO's are the answer to problems of cost and unavailability of health care.

"We have little idea concerning the magnitude of our urban and rural problems regarding drug and VD. We of medicine must take steps here in Missouri in conjunction with other agencies to acquaint ourselves with these symptoms of social illness and have import. No longer is this just a public health problem. We propose through the help of Drs. Bradshaw and Bill Knight to go to Dr. Donke to see what statistics he has. This is our business and I think we need to get involved in it."

Dr. Miller reported that he was on the program of the Eighth Councilor District Meeting held in Springfield on September 9. Also on the program was Alan Bloom of HEW who spoke on HMO's and did a good job. We received wide press reaction and, hopefully, Dr. McAlhany will allude to some of the things said in the press.

PRESIDENT'S ADVISORY COMMITTEE REPORT

Dr. Miller reported that the President's Advisory Committee met in Columbia on August 22. Members of the committee stated that there is no place for a capable, young man to break into the structure of organized medicine. "Before this session is over, I hope to ask you to take some action regarding this. There is that unidentified graduate student—no organization, no involvement and ready to go into practice. It is the feeling of many of the young physicians that the MSMA and particularly the AMA are sterile. I do think physicians have no concept of economic problems in our communities. They don't get this information—it is there, is readable and it is available, but, somehow, we are not reaching these people. There must be some communications tool we might be using, such as hospital staffs, newsletters, etc. How can they be reached?"

Dr. Miller said that he was pleased that the Council gave him the privilege of forming this Committee of young physicians. He urged the Council to read "Health Care in America: A Heretical Diagnosis" by Harry Schwartz in the August 14 issue of *Saturday Review*.

Dr. Miller invited all members of the Advisory Committee to attend the MSMA Council meeting in January and the Public Affairs Conference which will be held in conjunction with it. He then made the following assignments to Committee members: Dr. Fairchild to seek mechanisms whereby the MSMA can inform medical students and house staff members concerning organized medicine and the private practice of medicine; Dr. Hunt to seek ways to get student house staff members and young physicians in practice involved in organized medicine.

Dr. Miller asked Dr. Lewis to consult with school officials at various levels to seek ways in which the MSMA can work with school systems to provide more effective instruction in health related subjects such as sex education, venereal disease and drug abuse.

Drs. Rother and Hunt were asked to suggest possible ways in which the election of Councilors and Officers of the State Medical Association could be changed to give members a great voice in such selection. Dr. Heutel was asked to use his contacts with corporations in the St. Louis area to compile information concerning the drug problem in industry and to determine what steps are being taken to combat the problem.

After discussion, on motion, duly seconded, the Report of the President's Advisory Committee was accepted.

HEALTH CARE FOUNDATION

Dr. Benoit, Chairman of the Health Care Foundation of Missouri, gave a brief report on recent activities of the Foundation. He reported that the Foundation has had the opportunity to present a special part of the program for the Annual Seminar of Kansas City Blue Shield. Basically, the group was presented information on what the HCF is, what peer review is about and how it should work. A peer review panel was conducted.

Dr. Benoit further reported that they have accepted the responsibility for presenting a telelecture series regarding the Health Care Foundation. This will be heard through 52 outlets throughout the state.

The Health Care Foundation will hold a Board meeting on Sunday, September 19. One item on the agenda is necessary changes in the bylaws, primarily

having to do with membership.

Dr. Benoit stated that a ruling by the Legal Counsel of the Board of Registration for the Healing Arts indicated that the two Board members serving as ex officio members of the Judicial Committee of HCF should not serve due to possible conflict of interest. In view of this, the HCF bylaws will be changed accordingly. On motion of Dr. Martin, duly seconded, the report of the Health Care Foundation was approved.

PROBLEMS REGARDING TRAINING NURSES
IN N.W. MISSOURI

Dr. Martin reported on problems of schools for training nurses in Northwest Missouri. He stated that only one school with a straight two-year program is available, and it is having difficulty with the State Board of Nursing and its regulations. He said that at St. Joseph, Missouri Western College had 63 applicants, but only 15 were accepted due to certain regulations of the State Board of Nursing. The nurses training program at Methodist Hospital in St. Joseph has no accreditation. He stated that the problem of training more nurses is critical and something will have to be done about it. It was pointed out that considerable conflict exists between the diploma schools and the degree schools which is hurting the nursing profession and must be resolved.

COUNCILOR DISTRICT REPORTS

Dr. Martin reported that the First Councilor District meeting is scheduled for November 17 at the Roubidoux Hotel in St. Joseph. Dr. Martin then stated that the Rotary Club had planned to use a slide presentation furnished by the U. S. Chamber of Commerce entitled "Health Care—The Great Debate." He said they previewed the film before showing and found that it was very misleading from the doctors' standpoint, but, also, some of the statements were damaging. Needless to say, the Rotary Club did not use the presentation.

Dr. Bach, Second District, reported that within the past 18 months in Hannibal, one of the hospitals has installed a cardiac care unit. He also stated that they are contemplating the installation of an isotopes program and are starting on a new hospital building program of approximately 2.5 million dollars.

Dr. Franklin, Third District, said that the St. Louis Medical Society Council passed a resolution on Water Pollution supporting Proposition #3 which will be presented to the State Water Pollution Board. He also said he was instructed by the St. Louis Medical Society Council to report to the MSMA Council that the Health Care Foundation should not accept any federal funds. He also stated that the St. Louis Medical Society wishes to sponsor a series of travel tours and would like for the MSMA Council to approve co-sponsorship of these tours. He explained there is no monetary commitment involved. However, they feel this co-sponsorship would create more interest throughout the state and greater participation by members over the state. A meeting is scheduled on September 28 by their Travel Committee to determine how many are interested in these tours.

After discussion, on motion of Dr. Franklin, duly seconded, the Council agreed to co-sponsor the proposed travel tours of the St. Louis Medical Society.

(Continued on page 950)

medical melange

Notes of interest from Here

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and There

Dr. Wendell G. Scott, St. Louis, was presented the National Award of the American Cancer Society in New York City on November 5. A past-president of the Society, Doctor Scott was cited for outstanding leadership in worldwide cancer control through his accomplishments as a physician, educator and editor of *Cancer*, a clinical journal.

Dr. Joseph L. Fisher, Immediate Past-President of the Missouri State Medical Association and one of the founders of the Missouri Division of the American Cancer Society, was recently named a Life Board Member of the Missouri Division. Doctor Fisher served as head of the state organization in 1955-1957 and was one of the organizers of the Buchanan County Unit. He also was instrumental in the development of the cancer detection examination form used by many physicians throughout the state.

Dr. Oliver F. Duffy has been honored as the 1971 selection for Trenton's Hall of Fame. The award was made by **Mr. William O. Lenhart**, publisher of the *Trenton Republican-Times*, at a banquet attended by 225 persons. Doctor Duffy has practiced as a physician and surgeon in Trenton for 37 years. He has served on the staffs of the Sullivan County Memorial Hospital, the Noll Hospital in Bethany and is a staff member of the Wright Memorial Hospital.

Dr. Marvin Grossman has accepted a position on the staff of the State Hospital in Farmington. Formerly in general practice in Fredericktown for more than 20 years, Doctor Grossman has been Director of Medical Education at Madison Memorial Hospital. In his new position, his responsibilities will be in a clinical, rather than an administrative, capacity.

Dr. Hugh V. Ashley, Jr. of Cape Girardeau is one of 18 Missourians to be elected to receive 33rd degree honors, the final and highest degree of Scottish Rite Freemasonry. The 33rd degree is awarded to Scottish Rite Masons who have been invested with the Knight Commander Court of Honour for at least four years and have performed outstanding civic and religious services for their community, as well as service to Freemasonry and Scottish Rite. The degrees will be conferred at a private ceremony on December 18 at the Scottish Rite Cathedral in St. Louis.

Dr. Stanley Hall, Hannibal, chief of the pathology laboratories of Levering and St. Elizabeth's hospitals, served as chairman of the professional division of the 1971 Hannibal Community Chest Campaign. Doctor Hall is a member of the board of directors of the Douglass Community Center, medical director of the Marion County Red Cross Blood Program and a member of the Hannibal Lions Club.



The long-awaited public hearings on the various proposals for national health insurance before the House Ways and Means Committee are now underway. Some 200 organizations and individuals are expected to testify during the scheduled six weeks of hearings.

Lead-off witness was HEW Secretary Elliot Richardson who revealed an entirely new proposal "to tighten controls on provider costs and inefficiencies."

The Secretary also outlined the long-awaited program for regulating private health insurance companies. In the 38-page statement, Richardson was highly critical of the Kennedy-Labor Bill.

Richardson said the provider controls and the insurance company plan will be submitted in legislative detail to the Committee shortly.

Following is a summary of the Administration's text on the provider plan:

"In order to help the consumer become a prudent buyer in the medical care market and to protect the consumer against unnecessary increases in health care costs, we shall propose the following provisions:

... The states shall require health insurance companies to inform prospective policyholders as to benefits, exclusions, premium costs and delivery system choices.

... The states shall require providers to inform the public as to charges for standard items and other patient access matters.

... We will establish on an experimental basis local quality review organizations composed of outside medical experts, including nonproviders in some instances.

... We also propose to require NHISA carriers to apply control measures and statistical reporting measures in accordance with federal guidelines, such as strict review of utilization of health care services. Specific plans for implementation with regard to wages and prices will be developed in conjunction with the Committee on the Health Industry established by the President under Phase II of his new economic policy.

... State planning agencies will be required in cooperation with area-wide planning agencies and as a condition of federal grant support and approval to identify geographic areas of physician and facility oversupply. States are to develop and apply detailed

criteria based on federal guidelines and publish this information."

Under the proposed insurance company regulations, Richardson said:

"We intend to secure agreements with states under which the states will—

... Require annual, independent audits of participating insurance companies.

... Create state health insurance insolvency mechanisms. A federal mechanism also will be established for use if a state fails to act satisfactorily.

... 'File and use' procedures for premium rates under NHISA insurance contracts, with authority to disapprove extraordinary rates.

... Require disclosure by insurers of their administrative expenses as a percentage of premiums.

... Create state insurance pools, on a statewide or substate basis open to small employers, the self-employed and those who are not employed but are ineligible for federally-financed health programs."

Richardson said he was certain the hearings "will culminate in a national health insurance program." The Administration's plan avoids the danger of two extremes—proposals that do little to alter the present system and proposals to substitute a monolithic federal scheme, he declared. Richardson said proponents of the Kennedy-Labor Bill "seem to assume that radical intervention by the federal government in health care, in an inflexible, predetermined and monolithic manner, is the only way to solve health organization and delivery problems. I suggest that we are more likely to attain our common health objectives by stimulating competition and by promoting consumer education and freedom of individual choice, rather than by resorting to fiscal coercion and unrealistically global schemes." He estimated it will cost \$60 billion in new taxes.

The American Medical Association's Medicare and the Health Insurance Association of America's plan also were criticized. The major shortcoming in both, said Richardson, "is the great unlikelihood of achieving universality in protection."

The catastrophic protection plans, standing alone, "do very little for very few people—far less than what this nation must do if it is to act with

a full sense of responsibility," the HEW Secretary testified.

Mills opened the hearings by noting that health providers are beset by many problems. High quality care is available but unevenly distributed, he said, and costs are rising, there is lack of planning, the nation depends on importing foreign graduates and consumers often find care difficult to get.

With the Administration's testimony in hand, the Committee then turned to the long parade of witnesses from such diverse organizations as the College Democratic Clubs of America to the Senior Citizens Golden Ring Council to ascertain how they think the nation's health care system should be reshaped.

AFL-CIO President Meany told Committee members that "Labor will vigorously oppose" any efforts to dilute its plan for national health insurance.

"I hope and firmly believe that we won't have to come back in the next Congress," Meany said. "But, if we have to, we will come back again and again until the Health Security Program is enacted. And, if we have to, we will take this issue to the people in the elections of 1972."

Meany blasted the national health insurance proposals of the Administration, the health insurance industry and the AMA, saying they "would all just pour new money into the present health care delivery system, which is a failure."

He said that AMA's Medigap "represents a major shift in direction for organized medicine . . . but it is little more than a continuation of the present unsatisfactory system of delivering health care."

Meany scoffed at warnings that physicians might rebel if the labor bill is enacted. "The vast majority of doctors are dedicated, proud professionals whose basic concern is for the sick and ailing."

Committee member Hugh L. Carey (D., N. Y.) told the labor witnesses that, when the committee meets in executive session, it must face the fiscal considerations involved and try to develop a measure that fits within some dollar figure. He asked whether labor would be willing to make a choice between comprehensive coverage for part of the population or basic coverage for all. A labor witness replied to the effect that labor does not want to make such a choice now. "We will cross that bridge when we get to it."

The American Farm Bureau Federation urged caution against the creation of "a powerful bureaucracy of great scope" and the National Federation of Independent Business came out flatly

against any compulsory insurance system.

The American Public Health Association called for a broad national program with heavy emphasis on speeding development of prepaid group plans. The goals set forth by James Kimmey, APHA Executive Director, fit the labor bill more than any other proposal, but the association did not endorse a single measure.

Equitable Life Assurance Society President, J. Henry Smith, accompanied by Daniel Pettengill and Ardell T. Everett, presented the combined statement of the Health Insurance Association of America, American Life Convention, Life Insurance Association of America, and Life Insurers Conference.

Smith urged enactment of "The National Health Care Act of 1971," the insurance companies' plan under which federal standards would be set for insurance coverage, personal and corporate income tax incentives would encourage participation and federal-state subsidies would finance coverage for the indigent and medically-indigent as well as uninsurable persons with sliding scale contributions for premiums.

Comprehensive health insurance should be available to all, Smith said. "This can best be achieved at lowest cost and most rapidly by expanding the scope of existing health insurance plans . . . for those without resources, governmental subsidies are required."

"The choice between a pluralistic private insuring mechanism and a monolithic federal one is a fundamental choice that must be made before any national health insurance plan can be adopted. We think our record of accomplishments is good and our potential is great."

Replying to charges that private companies have failed to stem rising costs, Smith said the principal causes have been rising wages, more costly equipment and expensive new life-saving techniques. He asked whether insurers were supposed to prevent these developments.

Furthermore, the witness said, "insurers have tried hard to spot and control overcharging. We have worked with medical societies to set up peer review committees, not just for the purpose of catching overcharges but for the purpose of educating physicians not to overcharge in the first place."

The National Association of Insurance Commissioners urged preservation and expansion of the existing system of private health insurance and recommended utilization of the state insurance regulatory mechanism rather than a new federal one.

"The abandonment of the extensive system of private health insurance in favor of an all-government program would reject decades of expanding and improving an ongoing system and would cause severe dislocation in both state and federal revenues," said Russell van Hooser, Insurance Commissioner of Michigan.

The International Association of Health Underwriters "wholeheartedly" supported the Private Insurance Company Bill.

The American Dental Association said any National Health Program should start out with a dental component that concentrates on preventive services for children. Any program approved should include dental benefits. The same stand was taken by the American Society of Oral Surgeons.

Leonard Woodcock, President of the United Auto Workers Union, told the Committee "it is time to cancel the insurance industry" and impose a national health insurance program operated by the government.

Woodcock opposed the Administration's proposal to require employers to provide employees with health insurance from private firms, saying organized labor helped to create the private health insurance industry, and supported it for three decades.

"But the private health insurance industry has failed," Woodcock said. "It has failed to control costs. It has failed to provide adequate benefits even for those with some form of coverage. After 30 years of effort, all private health insurance combined still covers only a little more than one-third of private personal health care expenses."

Woodcock said the Nixon plan would not regulate the insurance industry although it would require purchase of \$30 billion of private insurance.

Pharmacists represented by the American Pharmaceutical Association urged the Committee to include drugs in any health insurance plan. The Committee is not expected to act on health insurance legislation until next year.

William G. Battaile, President of the American Association of Blood Banks, asked that no coverage be provided to pay for blood transfusions. He contended that payments would encourage greater use of commercial blood banks and increase the risk of hepatitis.

At the end of the second week Ways and Means Chairman Wilbur Mills had attended only one of the hearings and other committee members seemed to be platooning themselves in the arduous task of listening to the opinions of so many diverse organizations and individuals.



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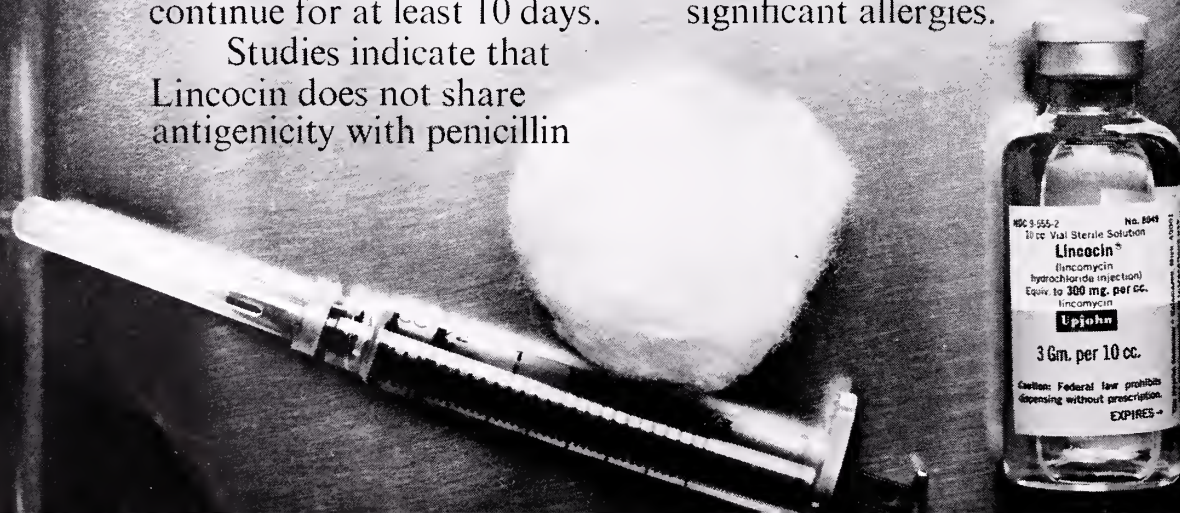
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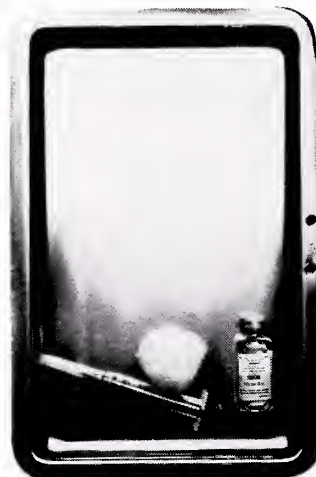
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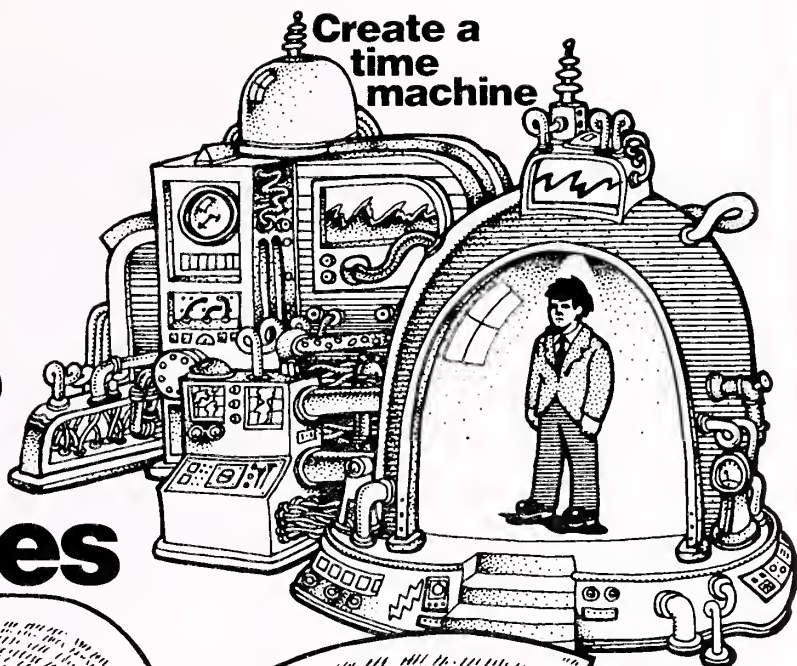
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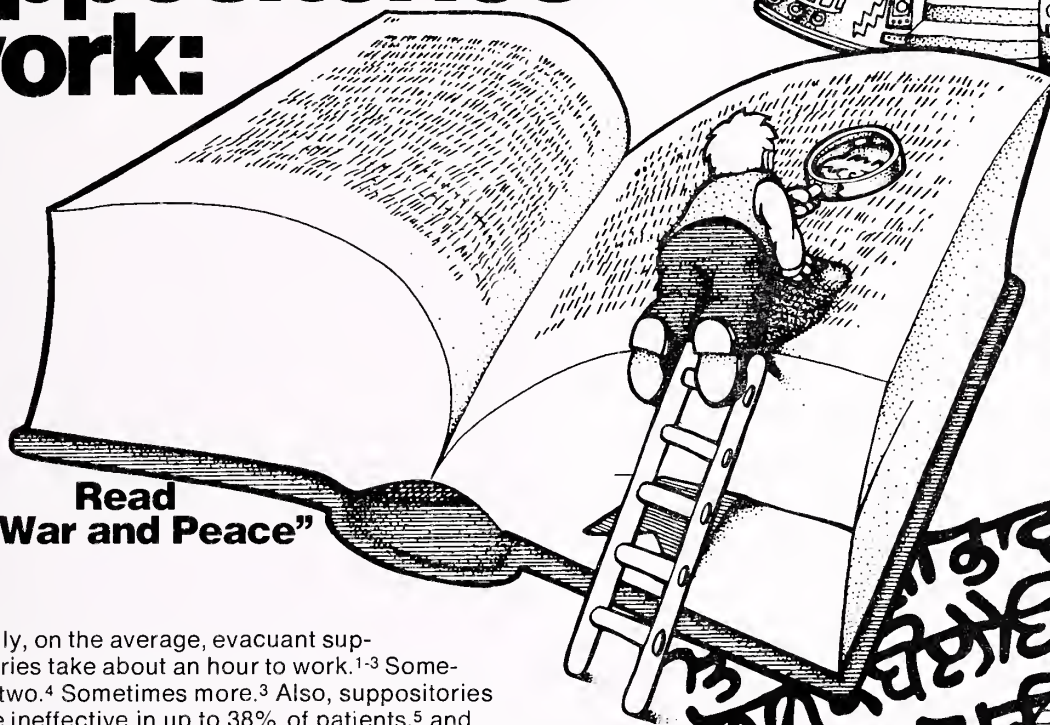
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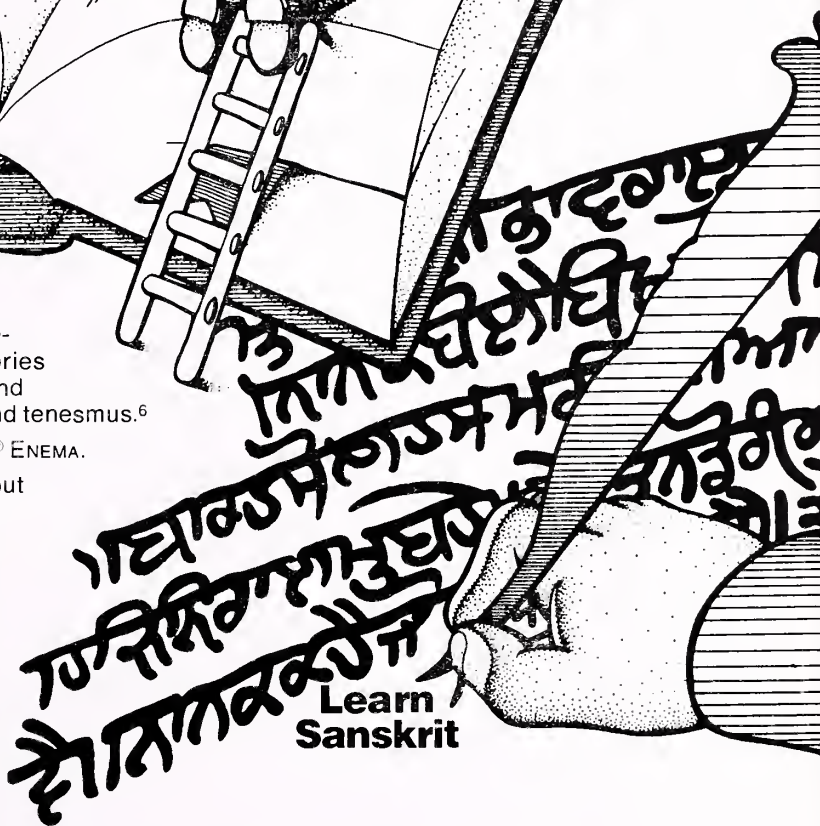
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MANINDRA N. MITRA, Ph.D. and
HARRY D. BROWN, Ph.D., *Columbia*

High Resolution Estrogen Analysis in Routine Breast Cancer Screening

ATKINS¹ SUGGESTS it is highly probable that "women with greatly enhanced susceptibility to carcinoma of the breast can upon the basis of steroid analysis be distinguished years before any lesion becomes apparent." This prediction is based upon the fact that the ratio of urinary etiocholanolone to 17-hydroxycorticosterone differs in patients as a function of breast carcinoma and propensity for it. There have been numerous other reports as well, associating neoplasms with changes in the distribution patterns of urinary steroids (particularly 17-ketosteroids). Urinary estrogen concentrations were found to be elevated in patients with carcinoma of the breast.²⁻⁵ Other workers have described cases with lowered urinary estrogen levels⁶⁻⁸ and the failure to find significant differences also has been reported.⁹⁻¹¹ The estrogen metabolism of carcinoma patients has been found abnormal after steroid loading. It was reported that cervical cancer patients excreted smaller quantities of estrone, estradiol and estriol than did controls.¹² Brown¹³ reported a higher estriol/estrogen ratio in patients with mammary cancer than in controls. It has been shown that some patients with early breast cancer have lower etiocholanolone and androsterone secretion ratios.¹⁴⁻¹⁶

Differences have been shown after androgen loading.^{10, 17-19} Experiments using estradiol phos-

phate were described by Gronroos and Aho,²⁰ Gordon *et al*,^{21, 22} Day *et al*²³ and Brown *et al*.²⁴ have reported that primary breast carcinoma tissue contains a modified sterol content pattern and includes a sterol or sterols which is osteolytic. Cholesterol, desmosterol, stigmasterol and β -sitosterol have been presumptively demonstrated in breast and other tumors; the osteolytic sterol is presumed similar to 7-dehydrocholesterol.²⁴

Thus, there have been numerous reports of differences in total and individual ketosteroid levels in cancerous subjects compared with normals, differences in ratios of given steroids and differences in metabolism following loading procedures. The results of loading experiments have led, in turn, to the consideration of the nature and level of intermediates. Siperstein²⁵ has described differences in cholesterol metabolism as measurable in terms of relative levels of desmosterol vs cholesterol in individuals after ingestion of the inhibitor triameinolone.

Yet another direction of study has considered the binding of sterols (17 β -estradiol) to malignant and benign mammary tumors.²⁶ Although there was binding of estradiol-17 β in the normal tissue surrounding the tumor, some of the malignant tissue samples also bound significant levels of the sterol.

Despite the fact that voluminous literature indicates a diagnostic value in clinical chemical evaluation of steroid levels in urine (or other sources), this information is only rarely available to the oncologist because the methodology has not been routinized at an economic level. The work described in this report has been designed to bring high-resolution gas-chromatographic estrogen analysis to an acceptable cost level for use in mass cancer screening, at least for women in age groups that are at high risk to breast cancer. Doctor Mitra is a Scientist and Doctor Brown is Chairman, Biochemistry Section, Cancer Research Center. This investigation was supported by the Missouri Division of the American Cancer Society and General Research Support Grant # FR-05618-05.

Enzymatic activity intrinsic to the metabolism of sterols (sulfate adenylyl transferase, adenylyl sulfate kinase, 3- β -hydroxy steroid sulfotransferase and estrone sulfotransferase) also has been shown to be low in a percentage of tumor preparations.²⁷

Despite the fact that voluminous literature indicates a diagnostic value in clinical chemical evaluation of steroid levels in urine (or other sources), this information is only rarely available to the oncologist because the methodology has not been routinized at an economic level (Economic limitations upon detection methodology have been discussed earlier in this Journal).²⁸ Purely chemical methodology has proven to be insufficiently accurate, and methods based on chromatographic or other separations have proven to be too expensive and, thus, remain unproven as bases for routine clinical methodology. The work described in the present report has been designed to bring high-resolution gas-chromatographic estrogen analysis to an acceptable cost level for use in mass cancer screening, at least for women in age groups that are at high risk to breast cancer.

Methods for the determination of urinary estrogens may be broadly divided into two classes: (1) colorimetric²⁹⁻³² and (2) gas chromatographic.³³⁻³⁶ The colorimetric method has the disadvantage of being dependent on the presence of chromophoric groups in the estrogens, and it is impossible to distinguish between substances with similar characteristics. The gas chromatographic method is superior in this respect and has been applied by many to the

quantitative analysis of estrogens.³³⁻³⁶ Although this method has been used successfully for the separation and estimation of mixtures of pure estrogens and their derivatives as well as estrogens in pregnancy urine,³⁷⁻⁴⁰ the analysis of estrogens in normal urine is difficult since the concentration of these compounds is very low in relation to the amounts of interfering substances.

Literature (*loc. cit.*) dealing with the estrogen content of urine indicates that pregnancy urine may contain an average of 40 mg of total estrogens per 24 hours whereas in a normal female, the excretion of total estrogens may vary from 4 mg to 60 mg per 24 hours. Other estrogen metabolites also have been isolated from human urine, e.g., 2-methoxy derivatives of estrone and estriol, 18-hydroxyestrone and 16-ketoestradiol-17 β .⁴¹ Besides the presence of other steroids, which may be precursors in the biosynthesis of estrogens, there are various nonsteroidal compounds in urine which block the development of a quick assay method for a small quantity of estrogens. In view of this difficulty, an extensive purification of urinary extracts before analysis is necessary,⁴² sometimes by thin layer chromatography,⁴³ before running the sample on gas liquid chromatography (GLC). In order to find a useful, low cost procedure for routine assay of these compounds from urine, purification procedures to prepare estrogen extracts suitable for GLC analysis were critically examined and a useful modified procedure to this effect is now reported.

METHOD

In one procedure, a volume of urine equivalent to about five hours excretion out of a 24-hour collection was mixed with one fifth volume of concentrated hydrochloric acid and refluxed for one hour in order to hydrolyze the steroid conjugates. The hydrolyzed urine was cooled under tap water and extracted with ether. The ethereal extract was washed with sodium bicarbonate solution and water followed by extraction with normal sodium hydroxide. The aqueous layer was separated and acidified with 6N sulfuric acid, extracted with ether, washed with water and dried over anhydrous sodium sulfate. The estrogenic residue was left after removal of the solvent. When this residue was analyzed (by gas liquid chromatography), none of the common estrogens could be detected but some of the peaks corresponded, in relative retention times, to degradative products of estrone.

Metcalf⁴⁴ reported the decomposition of uri-

nary 17-oxo-steroids in acid and studied the rates of decomposition of some androgens. In the present instance, it is found that estrone, after prolonged boiling with 2N hydrochloric acid in aqueous alcohol, affords products having relative retention times of 0.27 (OV-1) and 0.67 (OV-1) (compare with the value for estrone in Table 1). Although the use of degradative derivatives may have value in analysis, this possibility was not pursued and sample handling techniques were used which would allow estrogens to correspond without alteration to the sample from which they were derived.

It is difficult to handle the larger volumes of urine conventional to the 24-hour sample and significant expense resides with the volumes of chemicals and solvents needed for purification. Hence, we subjected the 24-hour urine sample to lyophilization and an attempt was made to purify the resulting residue to a stage suitable for analysis by GLC. It was observed that after treatment with acid, lyophilized urine could not be completely extracted in a separatory funnel with ether because of the heavy emulsion. A continuous liquid-liquid extraction procedure was adopted to obtain the steroids from the acid-hydrolyzed urine. The procedure is schematically represented in Fig. 1.

For analysis by GLC, a nonpolar phase like OV-1 and a somewhat polar phase like OV-17 were tried. Table 1 shows the relative retention times of common estrogens and their derivatives. The relative retention times of trimethyl silyl ethers of estrogens on OV-1 are higher than those of parent compounds unlike the corresponding values on OV-17. This is due to the nonselective nature of the OV-1 column which elutes the compounds in the order of their molec-

TABLE 1
RELATIVE RETENTION TIMES OF ESTROGENS
AND THEIR TRIMETHYL SILYL (TMSi)
DERIVATIVES RELATIVE TO 5 α CHOLESTANE*

	OV-1	OV-17
Estrone	0.46	1.38
Estradiol-17 α	0.48	1.27
Estradiol-17 β	0.50	1.36
Estriol	0.88	3.09
Estrone TMSi	0.52	1.00
Estradiol-17 α TMSi	0.61	0.61
Estradiol-17 β TMSi	0.68	0.77
Estriol TMSi	1.40	1.46

* Absolute retention time of 5 α -cholestane: 12.5 min on OV-1 and 11.6 min on OV-17.

ular weight. Luukkainen *et al*³⁷ reported similar behavior of estrogens on a nonselective phase like SE-30. The use of the OV-1 column has the advantage that the ether derivatives of the estrogens have fairly different retention time values and comparatively low absolute retention times at a temperature used in this experiment. The retention times on the OV-17 column are comparatively higher and, moreover, estrone trimethyl silyl ether has the same retention time as 5 α -cholestane which has been used as an internal standard in all our GLC work. Rosenthal and Yaseen,⁴⁰ however, used the OV-17 column and 5 α -cholestane as an internal standard in the determination of estriol in pregnancy urine by the gas chromatographic method.

Quantitation of the estrogenic steroids was carried out by measuring the areas of the estrogen derivative and internal standard peaks (area = peak height $\times$ peak width at half height) followed by conversion to the parent

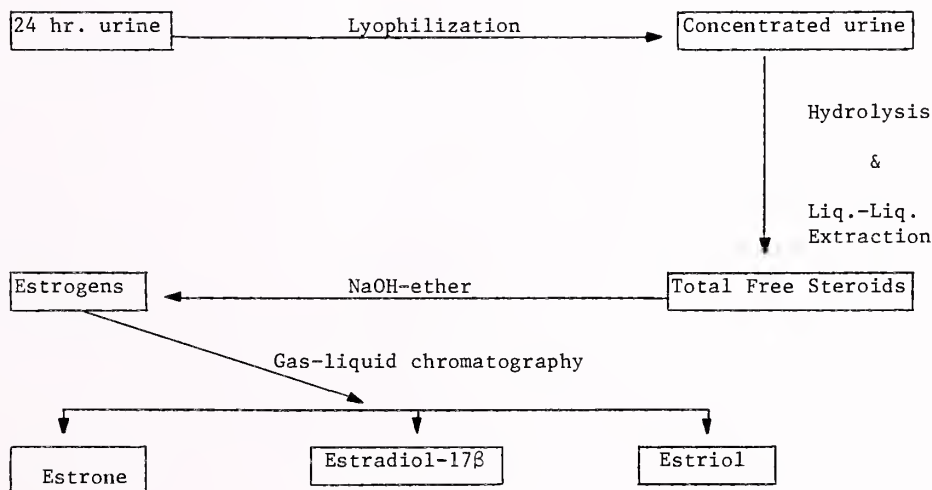


Fig. 1 Outline of procedure used for estrogen determination of 24-hour urine sample.

steroid and comparison of masses with that of the internal standard.

Experimental

Concentration of the urine sample. An entire 24-hour urine sample (1,750 ml) was divided into four parts and lyophilized in four tubes (capacity 600 ml each) in about 24 hours. If the 24-hour urine sample is less than 1 liter, this initial concentration by lyophilization is not done.

Hydrolysis. The lyophilized urine residue was collected and constituted a volume of 600 ml. Sixty milliliters of concentrated hydrochloric acid were added and the mixture was heated at 95 C to 100 C for ten minutes in an Erlenmeyer flask with magnetic stirring. The mixture was then cooled under tap water.

Total free steroids. The hydrolyzed urine was processed in a liquid-liquid extractor (1 liter) and taken off in benzene using an electric heating mantle for 70 to 75 hours. After 40 to 45 hours extraction, the benzene was changed by adding fresh solvent. The benzene extract was concentrated to about 250 ml by distillation in a flash evaporator. The recovered benzene was utilized for another extraction.

Estrogenic steroids. The concentrated benzene fraction was extracted four times with N sodium hydroxide (75 ml, 75 ml, 50 ml and 50 ml). The aqueous layer was separated and brought to pH 9.0 by adding 6N sulfuric acid. This was then extracted with ether four times using 75 ml for each extraction. The ethereal extract was washed with 15 ml of water and dried by anhydrous sodium sulfate. The dried extract, after removal of the ether, yielded a residue of estrogenic steroids.

Gas liquid chromatography. The residue of estrogenic steroids was mixed with 1 ml of a benzene solution of 5 α -cholestane (50 μ g/ml), internal standard. The solvent was removed on a flash evaporator and the residue was thoroughly dried over anhydrous calcium chloride in a vacuum desiccator overnight. The residue was dissolved in a few drops of Tri Sil TBT (Pierce Chemical Co., Rockford, Ill.) in a dry place and left stoppered for 15 minutes. The silylated estrogens thus produced were injected (1-2 μ l) into the gas chromatograph. Attenuation was adjusted according to the size of the peak obtained.

Recovery of Estrogens From Urine

Six samples of urine of males (500 ml-650 ml), each equivalent to about 12 hours excretion out of 24 hours collection, were mixed with

known quantities of estrogens, treated exactly as described under "Experimental" (above) and assayed for steroids. The concentration of estrogenic steroids in the normal urine of males is known to be small in comparison to the amounts added. The results are tabulated below in Table 2.

TABLE 2
RECOVERY OF ESTROGENS FROM URINE

<i>Estrone</i>				
	ADDED (μ g)	RECOVERED (μ g)	RECOVERY (%)	AVERAGE (%)
1. a.	12	12.0	100	91.1
b.	12	10.4	87	
2. a.	24	25.0	104	
b.	24	23.1	96	
3. a.	36	28.0	78	
b.	36	29.4	82	
<i>Estradiol</i>				
1. a.	17	18.8	110	96.0
b.	17	18.1	106	
2. a.	34	28.9	85	
b.	34	30.3	89	
3. a.	51	48.1	94	
b.	51	47.0	92	
<i>Estriol</i>				
1. a.	13	9.0	69	60.0
b.	13	6.7	51	
2. a.	26	17.0	65	
b.	26	17.9	69	
3. a.	39	18.3	47	
b.	39	22.2	59	

The results indicate that although estrone and estradiol are almost quantitatively recovered, estradiol recovery is only 60%. Although the low recovery of estradiol is not fully understood, Richardson⁴⁵ explained a similarly low yield of free estradiol upon the basis of the presence of urine sugar. For a routine determination of estradiol in a normal urine by this procedure, a correction factor for this estrogen may be applied for quantitation.

Analyses of Normal Urine of Females

By following the above procedure, the urine of normal females was analyzed for estrogen content and the results tabulated in Table 3. Although assays of more urine samples are needed to determine the procedure's precision, the total estrogen content of normal urine compares favorably with the values reported in the literature (*loc. cit.*). Values for estradiol appear to be a little higher than the reported value⁴⁶

TABLE 3

ESTROGEN CONTENTS OF FEMALE URINE (μg)

Subject	Estrone	Estradiol-		Total
		17 β	Estriol	
°1. a.	9.2	8.3	5.0	22.5
b.	10.0	9.1	4.8	23.9
2. a.	10.8	13.1	7.0	30.9
b.	10.5	12.3	6.6	29.4

* The urine collected was a 21-hour specimen.

(0 μg -10 μg) which may be due to the presence of a closely adjacent peak found to be present in the chromatogram.

DISCUSSION

The method described here involves fewer man-hours than any chromatography-based method reported for the determination of estrogens in urine. The liquid-liquid extraction procedure is especially suitable in the present system because the chance for emulsion to form is nil and extraction is accomplished without loss of efficiency. Preparation of derivative prior to GLC is simple and takes little time. No other compound except the derivative has been detected on GLC when the estrogens are freshly derivatized.

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The Library in a Small Hospital

With an Active Research Component

IT IS OBVIOUS that a library in a small- to medium-sized hospital that is engaged in research activities is going to have a budget too small to permit the development of a comprehensive collection in even a limited area. For example, to develop a comprehensive collection of neoplastic literature at Ellis Fischel State Cancer Hospital (EFSCH) and Cancer Research Center (CRC) would involve very expensive back-buying and an inordinate cost in foreign language materials that could not be justified in the setting under discussion.

It is suggested, therefore, that the library concentrate its limited resources on the development of service functions rather than the collection. This means that the library will offer a collection as balanced as possible in a general hospital and as narrow as feasible in a specialized hospital. In addition, the library will stress bibliographic control of pertinent literature, a strong reference collection and fast, efficient processing of interlibrary loan requests.

The librarian probably will work with a library committee. The members may or may not take their role seriously and can provide either no library knowledge or considerable expertise. Regardless of their quality, the librarian must

seek cooperation and attempt to work with them to develop library policies and procedures.

SELECTION

Selection of materials will be a difficult task. The budgetary limitations will be compounded by the difficulty of convincing the committee that a new bibliographic tool may be more useful than a new edition of one of their favorite texts which could be borrowed when needed from a neighboring library. An additional difficulty is that research-oriented scientists or physicians tend to be more active library users than their clinical counterparts. Yet, patient care is the primary objective of any hospital and, therefore, clinical works must be assigned priority. Hopefully, the librarian will be able to work with a library committee composed of library users, knowledgeable in their fields and willing to view the overall development of the library as their prime consideration.

The journal collection should be heavily clinical with only the most necessary research journals being included. The slight delay occasioned by interlibrary loan requests is usually less critical for the researcher than it is for the clinician who is in doubt about correct patient treatment. I believe this statement is valid in almost any setting, although it is obvious that those journals which constitute working tools for a department must be provided somehow. The librarian may have to insist that certain journals necessary to departments, but not within the means of the library budget, be purchased and, if necessary, held by the department.

In monographs, the librarian will be fortunate if he can provide more than the current basic texts in the various areas the hospital supports and the basic working tools of each department.

SERVICES

The bulk of the library's resources should be devoted to its reference and bibliographic collection. Proper and skilled use of appropriate

This author proposes that small general or special hospital libraries should concentrate their resources on services rather than trying to develop a comprehensive collection. He suggests the types of services that should be provided and how to maintain the collection. He also includes a design that stresses the availability of the staff for interaction with the users to promote maximum utilization of library sources and services. Mr. Hahn is Assistant Librarian at Ellis Fischel State Cancer Hospital and Cancer Research Center. This work was supported in part by General Research Grant # FR-05618-05.

indexing and abstracting tools will allow the library to locate, identify and obtain a far greater wealth of material than it could ever hope to own. Thus, the library should strive to obtain the materials necessary to provide the greatest range of services its staff will allow. For example:

1. The library should be able to provide both clinical and research personnel with bibliographies as requested. A well-prepared bibliography can save prospective researchers considerable time and authors considerable embarrassment. In addition to manual searches through *Index Medicus*, appropriate sections of *Excerpta Medica* and such other tools as may be available, the library should be able to develop a capacity for formulating MEDLARS searches or, at least, form a liaison for that purpose.

2. The library will be forced by its limited collection to rely heavily on interlibrary loans. This dependency on other resources makes diplomacy and tact highly desirable. The librarian should establish the best working relationship possible and seek opportunities to be of service to the lending library. Bishop¹ stresses the importance of developing from a state of dependence to a state "of continuing interdependence." While always desirable, this may not always be practicable. If the library is situated near other medical library facilities, it may find it expedient to initiate a courier service several times a week or even daily to retrieve and return requested items for its patrons. Depending on the quality of other local resources, the library will have to engage in moderate to heavy mail requests for interlibrary loans. If requests are processed promptly and if the citation is correctly verified, the request often can be filled within a week to ten days. The librarian must stress the importance of being provided with as complete and accurate a citation as possible.

3. If its staffing budget allows, the library may provide Xerox copies of materials in its collection as well as those borrowed from other libraries. The expense may be borne by either the library or the departments or individuals receiving the service. Some form of reprographic service will be necessary if only to assure prompt return of materials borrowed through interlibrary loans.

4. A very useful function that is in the province of the library is bibliographic verification of manuscripts and grant applications produced by staff members. Most secretaries are unfamiliar with the correct abbreviations of medical

journals (as are their bosses) and books are even more of a puzzlement. The librarian may find that an accurate file of material he has obtained for staff is an invaluable checklist in the bibliographic verification of subsequent manuscripts.

5. Current awareness services may be anything from circulating the right journal to the right people or simply calling attention to particularly pertinent general articles. It is most important that the librarian be aware of what activities and research projects are currently being undertaken by the staff and that he attempt to bring out and make available the parts of the collection that are most helpful to their areas of interest. Staff, in turn, should be aware that the greater the feedback they give the library staff, the better able the staff is to hone in on their interest areas.

The library staff probably will be determined by practical and mundane factors rather than potential contribution to the functioning of the institute. Ideally, at least one professional librarian would be on duty at all prime-user times. Minimally, then, two professional librarians would head the staff. The clerical help would consist of a full-time courier-Xerox operator if courier service were applicable. Otherwise, the Xerox operator might help process interlibrary loan requests. At least three additional staff members will be needed to operate the charge desk, shelve materials, issue and receive orders, handle correspondence and so forth. A staff of six should be sufficient to provide the above services quickly and efficiently.

THE COLLECTION

The size of the collection will vary considerably from library to library depending on how long it has pursued its collecting, its annual budget and the rate of growth it maintains. Various formulas have been devised for computing rates of growth,² and the librarian should attempt to arrive at an accurate estimated rate of growth for his library before trying to determine his space requirements.

Journals, in a medical library, normally constitute about 67% of the collection, according to Beatty.³ In a library with a limited budget, they represent a very costly investment and must be selected carefully. Numerous lists of "essential" or "recommended" journals have been produced to provide the hospital librarian with a guide to developing a subscription list.⁴⁻⁷ The easiest to use, in terms of subsequent bibliographic control, is, of course, the *Abridged Index Medicus*

(AIM) list. A large percentage of the titles on all the above lists are indexed by AIM. While this may serve as a starting point, it will be an unusual situation in which the librarian can be satisfied with such a list. Even general hospitals will tend to emphasize certain areas of disease, treatment and instrumentation over others and this will undoubtedly affect the library's collection. For example, Sam W. Hitt⁸ mentions the comprehensive collection of journals dealing with chest diseases held by the College of Medicine Library, University of Arizona, and attributes it to the location and the school's attention to this subject area. In a specialized hospital, the collection will undoubtedly be skewed even more noticeably.

The librarian should determine his own core list with the help of the experts' lists and through consultation with department heads and those clinicians or researchers who are avid library users. It is helpful to obtain a list of journals subscribed to by various staff members. The librarian may never have reliable access to them, but he will know, at least, that the department or individual most in need of the journal will have access to it. This can be a deciding factor if the budget is stretched to the breaking point.

The librarian will be able to exercise further selectivity when he considers which journal to bind. Journals vary a great deal in the type of material they publish and some are rarely consulted within more than a year or two of their publication. These journals may be held, unbound, for one or two years and then discarded, traded or exchanged.

The reference collection is possibly the most important element in this type of library, although proportionately it may be the smallest in number of volumes. The library may have a very limited collection, but it should provide access to as large a proportion of the medical literature as it can reasonably afford. In addition to *Index Medicus*, other subject indexes and various abstracting tools will be useful to the library. *Excerpta Medica* provides the most complete English language abstracting service for medical literature and possesses the advantage of being available in numerous subject sections which may be subscribed to individually. Current awareness tools, such as *Current Contents*, also may be used very effectively in the small medical library. They are particularly valuable if the librarian is attempting to maintain a selective reprint file. These tools provide the best

hope for requesting an article before the author's supply is exhausted.

The book collection of the library probably will not be very extensive. Like the journal lists, there are several lists of basic medical texts which can form the core of a hospital library collection. Even the specialized library will be unable to avoid the provision of some basic texts in other fields. This core collection, once assembled, will probably be expanded much like the journal collection in the areas of interest stressed by the medical and scientific staff.

For the general hospital library, it may be possible to provide most of the highly specialized monographs through interlibrary loan as they are requested. A thorough understanding of library procedures and the time involved in procuring interlibrary loans may go a long way toward making this a more viable procedure. Thompson⁹ has provided a thorough guide to interlibrary loan procedures.

DESIGN

A service-oriented library necessitates a great deal of interaction between the patron and the library staff. The library staff will often play the role of active mediator between the patron and the material he needs. It is particularly important, then, that the library be designed or arranged in a way that gives the patron easy access not only to library materials, but to the library staff as well.

At the same time, the library should be designed so that a minimal number of staff can provide maximal services during slow periods. The design shown in Fig. 1 permits operation by only one or two staff members when necessary: one at the charge desk and one to handle reference requests or any other problems.

During normal working hours (8 AM-5 PM), the library staff would consist of three or four personnel: a professional librarian, a Xerox operator, a clerk to operate the charge desk and another clerk for shelving, processing and typing cards.

The reference desk is located in a position that enables its operator to direct traffic throughout the library. The charge desk is by the only patron entrance to assure good control. The Xerox service is near the reference, journal and monograph collections, as is the interlibrary loan area. These two services can be handled by the same person when necessary.

There is a separate entrance for receipt of mail and other shipments. These materials can be processed in this back area and then put di-

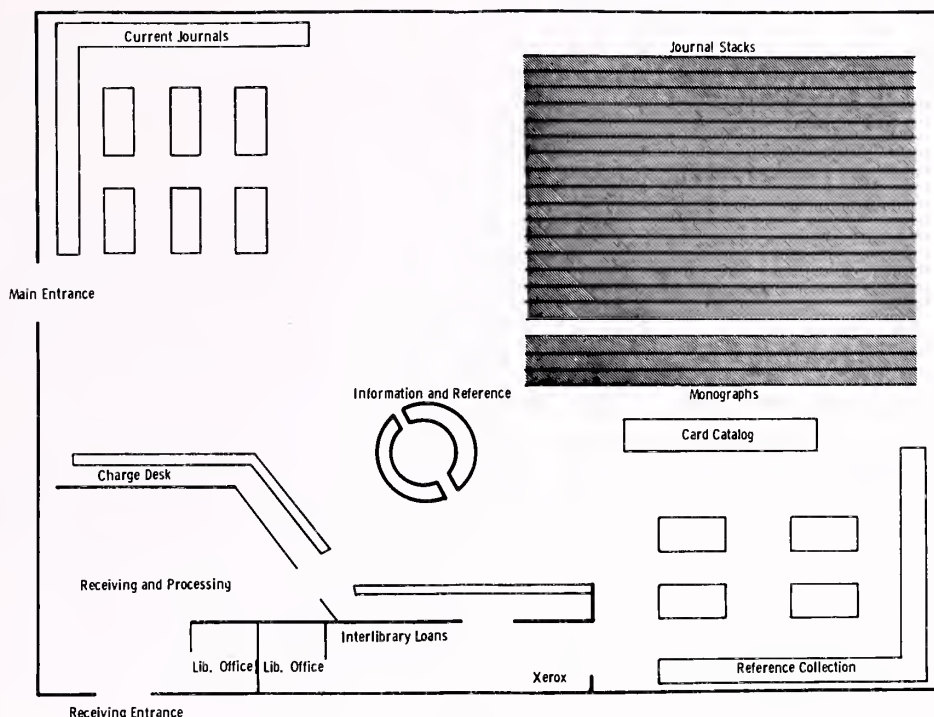


Fig. 1 A one-room library design that stresses the availability of the staff to library users.

rectly out on display shelves or simply shelved in the collection.

Study carrels may or may not be provided depending on the space available for utilization. If the library is unable to provide carrels and has a restrictive loan policy, e.g., 24 hours for bound journals, then it should be able to provide extensive copying services.

The counter which defines the staff area also stresses the availability of the staff to the patron by making them visible to the users.

Hopefully, the librarian will be able to convince his superiors of the importance of instructing the hospital staff, residents, students and, in fact, any potential library user in the ways the library can be used.

Library users who are acquainted with the available services and the ways in which to use them will be able to enjoy most of the benefits

provided by larger medical libraries. There may be a greater time lag between the request and receipt of material, but the small medical library should be able to provide almost any material available to even the largest medical libraries.

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Maxillofacial Prosthetics

IN RECENT YEARS, dentistry has assumed a responsible role in the management of cancer of the head and neck area. The general practitioner of dentistry is in a unique position to detect oral cancer in its early stages and initiate referral for treatment. He is qualified to conduct a clinical examination of the head and neck area, particularly the oral cavity, and can use biopsy techniques or exfoliative cytology to aid in his examination. In the treatment of malignant lesions, oral surgeons have participated with physicians when portions of the mandible are removed and have encouraged various means of reconstruction of the mandible when resections are required,¹ and "in the past 25 years, maxillofacial prosthetics has become of increasing importance in the management of patients with cancer of the head and neck."²

Maxillofacial prosthetics is the subspecialty of prosthodontics, a dental specialty, but, at the same time, it is considered an extension of surgery, functioning within the framework of surgery in its resective aspects and some reconstructive aspects.³ It is the art and the science of dentistry which concerns itself with prosthetic rehabilitation of patients with functional and cosmetic deformities which are surgical, traumatic or congenital in etiology. The services performed by a maxillofacial department are vital

to the quality of survival of patients "cured" of their disease. Aids to surgery and radiotherapy can be constructed which will benefit the patient during treatment and will make the patient more receptive to a prosthesis as the final mode of reconstruction after discharge from the hospital. Some prostheses can be constructed which will provide physiologic therapy for patients with conditions induced by surgery or radiation such as trismus. Other prostheses aid the radiotherapist by defining the radiation fields or by displacing tissue that need not be treated. The maxillofacial prosthodontist also becomes involved in managing the dental complications due to irradiation therapy.

TYPES OF SERVICES PROVIDED TO SURGERY

Often, the treatment of choice for maxillary or mandibular lesions is surgical resection. If a partial maxillary resection is to be performed, an immediate obturator provides several advantages. If the patient has a number of teeth remaining in the maxillary arch, an obturator can be constructed which will hold the packing firmly against the graft. By closing the defect, the obturator allows the patient to speak comprehensively immediately after the surgical procedure. It eliminates, in most cases, the need for a nasogastric tube and the patient is able to take in food by mouth almost immediately. It also is of psychological benefit to the cancer patient. In a recent study, it was demonstrated that patients utilizing immediate obturators had a significantly shorter average hospital stay than those patients for whom no immediate obturators were constructed.⁴ Other aids which can be provided to surgical patients are implants which are used to replace contour and function lost as a result of mandibular resection. Alloplastic implants can be constructed which will either replace the lost segment or aid in autogenous bone grafting. These are inserted by the prosthodontist at the time of surgery. Care is taken and splints are constructed to insure that proper occlusal relationships are maintained or established (Fig. 1).

TYPES OF SERVICES PROVIDED TO RADIO THERAPY

Patients to be treated with radiotherapy to the head and neck area are examined prior to

Maxillofacial prosthetics is the art and science of dentistry concerned with the prosthetic rehabilitation of patients with functional and cosmetic deformities. This paper illustrates how this dental specialty has become increasingly important in the management of patients with cancer of the head and neck by providing aids to the surgeon and radiotherapist as well as the patient. The maxillofacial prosthodontist provides services vital to the quality of patient survival. Doctor Guerra received his training at M. D. Anderson Hospital and Tumor Institute under a two-year Public Health Service Grant, # 77982-04-69. He is a postdoctoral fellow at the Cancer Research Center under Public Health Service Training Grant # CA-08018-02.

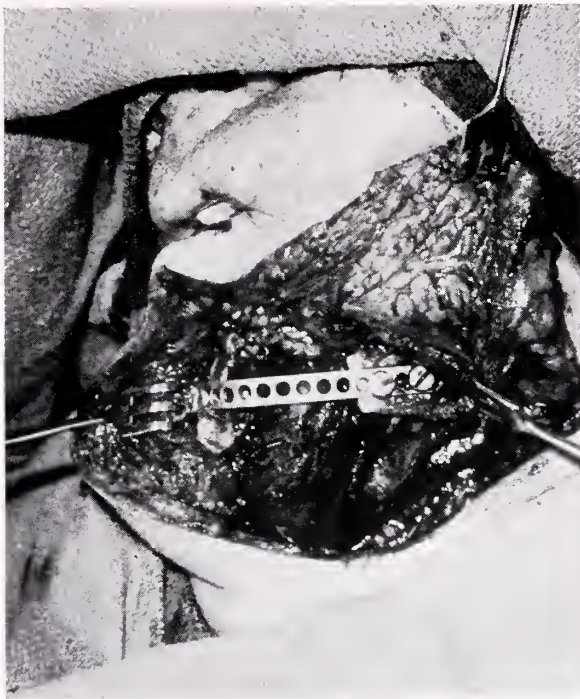


Fig. 1 Squamous cell carcinoma of the floor of the mouth involving the mandible has indicated segmental resection of the mandible. Absence of immediate fixation will create functional impairment. Fixation and space maintenance will facilitate subsequent bone grafting, if indicated. A modified Sherman Plate has been inserted and fixated with a Bolt/Sleeve attachment. This relatively small implant has allowed for adequate soft tissue closure. Impressions are made at this stage allowing for subsequent measurements when bone grafting is contemplated.

treatment and the patient's oral situation is evaluated. Decisions are made as to whether or not extractions are indicated prior to treatment. The patient is introduced into an oral hygiene program and placed on fluoride treatment if teeth will be retained. The edentulous patient is examined and radiographs are taken to locate retained root tips or other conditions which should be evaluated. The patient is made aware of the consequences to his health if he does not institute a sincere oral hygiene program. The patient is then seen with the radiation therapist and the treatment is discussed. Often, certain types of radiation stents can be constructed which will aid the therapist in treatment. If an intra-oral cone is to be utilized, a cone locator can be constructed which the patient will utilize during treatment. This prosthesis assures that the cone is located in the same position during every treatment session, prevents shifting of the cone during the administration of treatment and keeps the tongue, lip and cheek out of the area of irradiation.² It is often useful to fix the

maxilla out of the field of radiation when the mandible is being radiated. This is accomplished quickly and effectively by use of an intra-oral prosthesis. Other prostheses can be constructed which will place soft tissue (such as the tongue) out of the radiation field or which will protect certain tissues by utilizing lead shielding in the stent. Radium carriers can be constructed which will carry and maintain radioactive material in close proximity to the lesion desired by the radiation therapist. These carriers are easily inserted and removed and provide protection to the adjacent tissues by placing them away from the radioactive material. The qualified maxillofacial prosthodontist also is prepared to manage the dental complications arising from radiotherapy, such as radiation decay and osteoradionecrosis (Fig. 2), abnormal tooth sensitivity and trismus. Conservative treatment in the management of osteoradionecrosis has achieved encouraging results in a recent study performed at M. D. Anderson Hospital and Tumor Institute, Houston, Tex.⁵



Fig. 2 This severe osteomyelitis appeared after a high dose of direct radiation. Dental examination and evaluation prior to irradiation of the head and neck area is essential if the incidence of osteoradionecrosis is to be reduced. Decisions regarding the extraction of teeth prior to radiotherapy must be made. Recent investigations have indicated that extractions in a previously radiated (above 4,000 R) field contribute significantly to the clinical appearance of osteoradionecrosis.

REHABILITATION

The postoperative head and neck cancer patient presents the maxillofacial prosthodontist with a large percent of his reconstructive cases. Improved surgical techniques have allowed the surgeon to perform radical surgery and enhance survival rates. Technical advances in radiotherapy have contributed to greater numbers of "cured" patients. However, the responsibility of the medical profession does not end with the



Fig. 3 This patient underwent partial maxillary resection which did not necessitate tooth removal. An immediate obturator was inserted at surgery which aided in keeping the packing in place. The patient was able to eat and to speak comprehensively during his recovery.



Fig. 4 Same patient as in Fig. 3. After healing occurred, a modified partial denture utilizing a chrome/cobalt framework was inserted. This long-term obturator enabled the patient to return to a normal, productive capacity. Routine dental adjustments and follow-up have prevented speech and swallowing impediments.

elimination of disease. The fact that a patient is free of disease after having undergone extensive treatment, such as partial maxillary resection with orbital exenteration, does not free us of the responsibility that we have to return this individual to everyday society. Without the ability to eat and speak properly and without a suitable means of cosmetic reconstruction, the patient often undergoes sufficient psychological stress to cause him to retreat behind the doors of his home, even to retreat from his immediate family and become another "cured" statistic.

The preferred treatment for the reconstruction of many of these cases is plastic surgery. In the surgical treatment of cancer, the first effort is probably the most significant regarding the prognosis. When tissue can be saved, it is to the advantage of reconstruction from a plastic surgeon's point of view.⁶ This view is shared by the prosthodontist. If plastic surgery reconstruction is possible and is indicated, this is the treatment of choice. In many cases, however, prosthetic rehabilitation is preferred either by the surgeon or by the patient or is the only means by which reconstruction can be effected. Postoperative prostheses, which are routinely constructed by the maxillofacial prosthodontist, are long-term obturators, mandibular resection appliances, dentures for postirradiated patients and facial prostheses.

Long-Term Obturators

These obturators are constructed after complete healing has occurred. If the patient has teeth, a partial denture framework may be cast which will support the acrylic obturator. If the

patient is edentulous, a modified denture can be constructed. These prostheses allow the patient to function properly in speech and deglutition and also may be used to restore facial form and contour (Figs. 3 and 4).

Mandibular Resection Appliances

In selected edentulous cases in which the mandible has been partially resected without immediate reconstruction, it is possible to construct a lower denture which will allow the patient to achieve functional masticatory ability. Since the remaining segment of the mandible tends to deviate toward the defect due to muscle loss, fibrosis and scarring, it is often impossible for the patient to bring the maxillary and mandibular teeth into proper functional occlusion. A mandibular partial denture is then constructed in such a way that the mandible is guided into proper alignment with the maxilla during opening and closing movements.

Dentures for Postirradiated Patients

The patient who has received radiation to the head and neck area presents some unique problems for the dentist. Direct radiation to the maxilla and the mandible above certain levels increases the possibility of soft tissue necrosis and osteoradionecrosis. Radiation to the salivary glands changes the amount and the composition of saliva. This lowers the tolerance of the irradiated mucosa to withstand the pressures of a denture. Often, the patient should never wear dentures. For these reasons, it is advisable that denture construction for the irradiated patient be evaluated and undertaken by a qualified prosthodontist trained to recognize the early

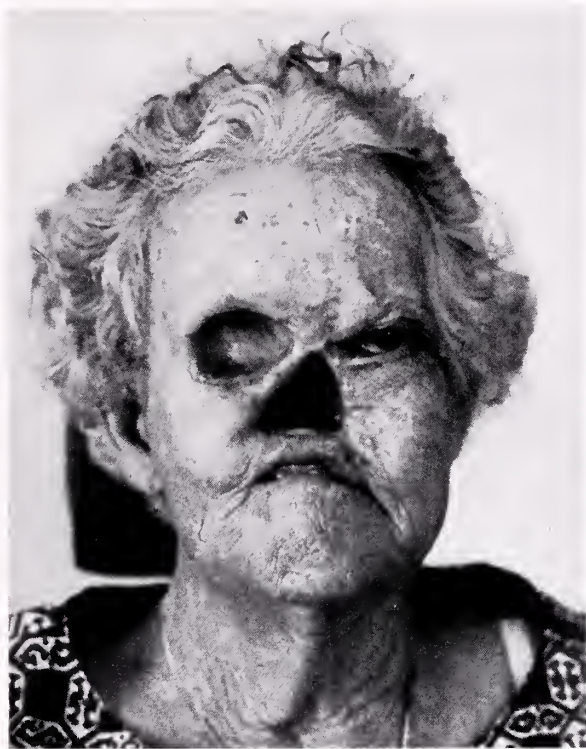


Fig. 5 Removal of aggressive tumor has resulted in facial disfigurement. Orbital exenteration and removal of the nose and floor of the nasal cavity have left severe cosmetic and functional impairment. The quality of survival must be considered in the definition of the word "cure."

signs of radiation complications. Adequate follow-up of these patients is essential.

Facial Prostheses

Another area which requires the services of the maxillofacial prosthodontist is the construction of extra-oral prostheses. The maxillofacial prosthodontist is trained in the construction of orbital and ocular prostheses, prostheses replacing the ears, the nose, the cheeks or any portion of the anatomy which can receive a prosthesis. Often, the cancer surgeon prefers prosthetic replacement of such structures in order to observe the resected area for signs of recurrence. In some cases, prosthetic replacement is an interim situation which the patient accepts until he is pronounced free of disease. Plastic surgery may then assume the responsibility of reconstruction. In other cases, prosthetic replacement is the "final" mode of reconstruction (Figs. 5 and 6).

SUMMARY

The role of a maxillofacial department in a cancer hospital is manifold. As part of the "team approach," the maxillofacial prosthodontist works closely with the surgeon, the radiothera-



Fig. 6 A facial prosthesis constructed of polyvinyl chloride has been inserted. Surgical adhesive or bifaced tape attaches the prosthesis easily, comfortably and safely. Glasses often aid in retention. An intra-oral obturator has restored the roof of the mouth and the patient is able to eat, speak and carry on daily activities in a normal fashion.

pist and the social worker to enhance the quality of the patient survival. Prostheses are often used in support of surgery and radiotherapy. Other prostheses can provide therapy for the cancer patient. Prostheses also are used as immediate, interim or final means of reconstruction. Rehabilitation of the patient with head and neck cancer is necessary for him to again be a contributing member of society.

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Carcinoma of the Ovary and Previous Pelvic Irradiation

Case Reports

THE END RESULTS for the treatment of cancer of the ovary have changed very little in the past 40 years. The chance of five-year cure is quite good (over 60%) if the tumor has not spread beyond one or both ovaries, but, it becomes very poor once there is even local pelvic extension.¹

Since neoplasms developed in the retained ovary in 7% of the patients who had unilateral oophorectomy for benign conditions² and 8.8% of cancer of the ovaries could have been prevented if these ovaries had been removed during previous operations, Terz *et al*³ recommended that ovaries be removed during laparotomy for any condition in patients over 40 years of age and at any age if there are atrophic changes in the ovaries, low estrogen effect on vaginal smear, evidence of arteriosclerosis when the abdomen is opened and when the operation is for cancer of the gastrointestinal tract.

In reviewing 356 patients with cancer of the ovary seen at Ellis Fischel State Cancer Hospital

in Columbia, Mo. between 1940 and 1968, we noted that eight of these patients had previous pelvic irradiation. We studied these cases with the hope of showing a relationship between pelvic irradiation and incidence of ovarian cancer and, also, if prophylactic oophorectomy should be included for patients with previous pelvic irradiation. The increasing usage of ionizing irradiation in medicine and the associated increased incidence of skin cancer, leukemia, thyroid carcinoma and osteogenic sarcoma with irradiation warranted this effort. Chisleag *et al*⁴ have shown radiation-induced cancer in 13 patients of a total of 15,000 adults who were irradiated. They estimated the general incidence of radiation induced cancer in adults to be 0.1% and that of children, 1%. The latency period between time of irradiation and onset of the cancer usually is in terms of years. In skin cancer, this is shown to range between eight and 56 years in a report of 34 cases.⁵

The eight patients with ovarian carcinoma mentioned had definite histories of previous pelvic irradiation. Seven of these eight cases had histological confirmation by pathologists at this hospital. Four patients had radiotherapy for carcinoma of the cervix and three patients had radiation for benign gynecological conditions. One patient (treated elsewhere) had radiation castration for disseminated breast cancer. The pertinent case information is summarized in Table 1. Thus, seven patients out of the total of 356 patients with ovarian cancers constituted only 2.2% in this series. We are not suggesting that patients who had previous radiotherapy to the pelvis might have a higher incidence of cancer since we do not know the size of the universe of all the patients who had previous radiotherapy nor those with ovarian cancer who were referred and seen in our hospital. The clinical courses of the cases reported here resulted from the development of ovarian cancers which could have been prevented if the ovaries were surgically absent.

This paper presents eight case reports of ovarian carcinoma in patients who had previous pelvic irradiation. Since ionizing radiation can be carcinogenic in action and irradiated ovaries are atrophic and of limited functional value to the patients and since primary cancer of the ovary may develop many years after radiotherapy, the authors suggest that irradiated ovaries should be removed prophylactically at the time of surgery if no other contraindications exist. Drs. Lee and Shahbazian are from the Cancer Research Center and the Departments of Surgery and Radiotherapy of Ellis Fischel State Cancer Hospital. This investigation was supported by Public Health Service Research Grant # CA-08023 from the National Cancer Institute and General Research Support Grant # FR-05618-05.

TABLE 1
Summary of Eight Patients With Ovarian Carcinoma

Pt. No.	Age (year)	Previous Radiotherapy		ESTIMATED DOSE TO OVARIES	Interval (year)	SITE	Ovarian Cancer	
		INDICATION	TYPE				HISTOLOGY	SURVIVAL FROM DX
1	53	Carcinoma cervix(I)	X-ray + radium	3500 r	2	Both	Pseudomucinous cystadenoca.	Died—5 Y
2	62	Carcinoma cervix(II)	X-ray + radium	L-5500 r R-4500 r	2	L	Serous papillary cystadenoca.	Alive—4 Y
3	35	Carcinoma cervix(0)	X-ray + radium	3000 r	13	L	Papillary adenoca.	Died—5 Y
4	49	Carcinoma cervix(I)	X-ray	2000 r	18	R	Papillary mucinous cystadenoca.	Alive—5 Y
5	62	Uterine fibroid	X-ray	400 r	10	Both	Serous cystadenoca.	Died—1 Y
6	47	Menometrorrhagia	Radium	200 r	13	R	Serous papillary adenoca.	Died—1.5 Y
7	41	Menometrorrhagia	Radium	300 r	25	Both	Adenocarcinoma	Died—2 M
8	39	Breast cancer(IV)	X-ray	300 r	12	R	Adenocarcinoma	Died—1 Y

CASE REPORTS

Four Cases Having Previous Radiotherapy for Pelvic Malignancy

Case # 1. In 1937, at the age of 53, the patient had postmenopausal bleeding and was found to have epidermoid carcinoma of the uterine cervix (stage I). At Barnes Hospital, St. Louis, she was treated with deep x-ray therapy to six ports (given dose of 9,600 r) followed by 5,000 mg-hrs of intracavitary radium. Study of the dosimetry showed that the cervix received about 9,000 r; point A, 8,000 r; point B, 4,000 r; and the ovaries received about 3,500 r. She was well until two years later when she developed acute abdominal pain, high fever, nausea and vomiting. On surgical exploration, gelatinous materials were removed from the peritoneal cavity, pseudomucinous cystadenoma of both ovaries was found (the right lesion had ruptured) and peritoneal implants were noted. Bilateral oophorectomy was done. Three years later, a 12 cm mass appeared at the site of the previous laparotomy scar. She was explored and pseudomyxoma peritonei was diagnosed. The bulk of the omental mass was excised, but tumor was left in the anterior peritoneal wall and the true pelvis. The patient was referred to Ellis Fischel State Hospital in 1944 for further management. She received palliative external roentgenotherapy to the lower abdomen with subjective improvement. The patient died at home two months after discharge.

Case # 2. The patient, age 62, was treated in 1964 at the Ellis Fischel State Cancer Hospital for mid-differentiated epidermoid carcinoma of the cervix with nodularity extending into the left paracervical area (stage II). She received telecobalt therapy to a calculated midpelvis dose of 4,000 r and intra-

cavitary curietherapy of 4,320 mg-hrs with radium tandem. Dosimetry studies showed that the cervix received about 7,000 r tumor dose, 6,400 r at point A and 4,500 r at point B. The left ovary received about 5,500 r and the right ovary, 4,500 r. She did well until two years later when a pelvic mass about 9 cm in diameter, thought to be uterine fibroid, was found. She was explored six months later. A cystic mass (12 cm x 15 cm) was found in the left ovary. Total abdominal hysterectomy with bilateral oophorectomy was carried out. Histological examination of the tumor showed serous papillary cystadenoma with focal changes of low-grade papillary carcinoma. The patient has been followed at regular intervals, and she is doing well without evidence of recurrence four years later.

Case # 3. At age 35, the patient had 22 treatments of 250 KV x-ray through four ports to a total tumor dose of 2,600 r at midpelvis, plus one radium insertion (3,000 mg-hrs) for intra-epithelial carcinoma of the uterine cervix in Arkansas in 1951. Calculation of the dosimetry showed that the cervix received about 3,200 r; point A, 5,000 r; and point B, 6,500 r. It is estimated that the ovaries received about 3,000 r. She did well until she felt a lower abdominal mass 13 years later. Laparotomy was performed at Burge-Protestant Hospital in Springfield, Mo., and a left ovarian tumor (6 cm x 4 cm) and omental mass (7 cm x 5 cm) were removed. Histology of the tumor showed mid-differential papillary adenocarcinoma with numerous psammoma bodies. The right ovary was adherent to the pelvic wall and was not resected. She was referred to the Ellis Fischel State Cancer Hospital for further management where she received a course of preoperative radiotherapy (tumor dose of 3,000 r) to the pelvis. She was reexplored in 1964 and intra-abdominal carcinomatosis with positive periaortic

node was found. A palliative descending colostomy was done because of rectovaginal fistula. She did relatively well without any further therapy. Two years later, ulceration and nodules appeared around the colostomy site and biopsy proved they were metastatic ovarian adenocarcinoma. She was treated with intravenous 5-fluorouracil for three months without visible improvement of the colostomy lesions. Subsequently, she received thio-tepa from her family physician and died in 1969.

Case # 4. In 1946, at the age of 49, the patient received external pelvic and transvaginal roentgenotherapy for epidermoid carcinoma of the cervix (early stage I) at the Ellis Fischel State Cancer Hospital. Calculation of the dosimetry showed that the cervix received a total of 3,250 r tumor dose, 1,000 r to point A and 750 r to point B. The ovaries received about 2,000 r. She was doing well until 18 years later when a large mass (14 cm x 12 cm) was found in the right lower quadrant. On exploration, the right ovarian tumor appeared benign and a single oophorectomy was done. However, histological examination showed mid-differentiated papillary mucinous cystadenocarcinoma. Abdominal hysterectomy and left oophorectomy were done subsequently and no residual neoplasm was found. The patient is living and well five years after the operation.

Three Cases Having Previous Radiotherapy for Benign Gynecological Conditions

Case # 5. At age 62, the patient had x-ray therapy (daily for about one week) for uterine fibroid in 1938. She was well until six years later when a lower abdominal mass was noted. She delayed operation for four more years when bilateral ovarian cancer (serous cystadenocarcinoma) was removed at the University of Missouri Medical Center, Columbia. She was referred to the Ellis Fischel State Cancer Hospital for further treatment. Over 8,000 cc amber ascitic fluid was removed by paracentesis and malignant cells were found by cell block. Teleroentgenotherapy was suggested, but the patient preferred to go home. She died one year later.

Case # 6. In 1938, at age 47, the patient received a short course of radiotherapy with radium for a difficult menopause complicated by menometrorrhagia. She did well until 1951 when bloody vaginal discharge appeared. She was operated on at the University of Missouri Medical Center and ovarian carcinoma was found. Bilateral salpingo-oophorectomy and abdominal hysterectomy were done. The histological slide showed serous papillary adenocarcinoma. She developed a rectovaginal fistula and recurrent pelvic tumor was found. She died one year later.

Case # 7. The patient, age 66, was first seen at Ellis Fischel State Cancer Hospital for bloody vaginal discharge in 1945. By history, 25 years previously, she had abnormal menstrual bleeding and

had a D & C followed by placement of radium into the uterine cavity. Pelvic examination on admission showed the presence of a mass posterior to the uterus. On exploration, intra-abdominal carcinomatosis from bilateral ovarian adenocarcinoma was found. The patient died two months later.

One Case Having Previous Radiation Castration for Recurrent and Disseminated Breast Cancer

Case # 8. A 32-year-old patient had left radical mastectomy for a small well-differentiated adenocarcinoma of the breast in 1950. Five years later, she had abdominal hysterectomy and left oophorectomy for endometriosis, and no evidence of recurrence of breast cancer was found. In 1957, skin nodules appeared at the chest wall (biopsy positive for breast cancer) and bony metastases were seen in the ribs and sternum. Radiotherapy was given to the pelvis for sterilization and the patient had good objective response. Eleven years later, massive pleural effusion appeared and malignant cells (consistent with primary adenocarcinoma of the breast) were found. The patient was given thio-tepa intrapleurally which controlled the effusion problem satisfactorily. However, a large abdominal mass was palpated and exploratory laparotomy carried out (12 years after radiation castration) showed carcinoma of the remaining ovary. The ovary was removed, and the patient was given postoperative radiotherapy to the abdomen. She died shortly afterward from widely disseminated disease.

DISCUSSION

In 1956, Palmer and Spratt⁶ studied 746 patients who had pelvic irradiation for benign gynecological disease and who were followed for more than 12 years; 9.5% of these patients later developed pelvic carcinoma. A total of 11 patients had ovarian cancer which was four times as great as would be expected by statistical laws. The average interval from radiation to the development of ovarian cancer was 10.1 years. Palmer and Spratt also analyzed previous studies which reported much lower incidences. The difference was explained by the fact that a majority of the patients reported previously were followed for less than ten years. In addition, since patients with controlled cancer of the cervix did not show high incidences of subsequent cancer of the adjacent pelvic structures (except vagina and vulva), they believed that the relative low irradiation dosage given for benign conditions might have had some growth-stimulating effect that the higher canceroid dosage did not have. However, Paloucek *et al*⁷ found that patients who had pelvic radiation for benign gynecologic diseases developed cancer at about the same rate as those patients who

had hysterectomies. The rate at which pelvic cancer develops in women who receive pelvic radiation is unrelated to the quantity of radiation given.

In 1959, Novak and Woodruff⁸ reviewed their experience of radiotherapy for carcinoma of the cervix and found only two cases in which an ovarian cancer occurred long after irradiation. Unfortunately, they did not give the total number of patients who received therapy nor the time intervals between therapy and, later, ovarian cancer. They thought that since ovaries were in greater proximity to points A and B than the lower genital tract or fundus, they might have received sufficient radiation dosage to prevent any carcinogenic transformation. Stein⁹ is of the impression that there is no greater incidence of leukemia, bladder, bowel, ovarian or bone cancer in women who have been cured of their cervical cancers. At the Ellis Fischel State Cancer Hospital, there were 597 patients with cervical cancer who received radiotherapy from 1949 to 1958. There were 200 patients (33.5%) still alive with no evidence of disease at the end of ten years. Patient # 4 reported here is one of the 200 patients, and she developed ovarian cancer 18 years after radiotherapy. Another patient (# 3), who was treated elsewhere, developed ovarian cancer 13 years after therapy. In two other cases (# 1 and # 2), the ovarian tumors were discovered two years after radiotherapy for cervical cancer and, thus, they could have been synchronous lesions. This gives support to the recent suggestion that perhaps preradiotherapy exploratory laparotomy should be done for cancer of the cervix to improve the staging systems and to detect other coexisting pathologies.

Although the number of cases reported here is small (only eight), a review of the literature does not appear to indicate a correlation between the occurrence of ovarian carcinoma and the dose of ionizing irradiation to the ovaries or the age of the patient when the irradiation

was given. Also, in almost all cases, both ovaries received about the same dose of irradiation, but only one of them developed a neoplasm.

From a study of data collected by the Connecticut Tumor Registry, Shoenberg *et al*¹⁰ reported a more than twofold increase in observed-to-expected incidences of secondary primary cancer in the ovaries of those patients who had breast as the site of their first primary cancer ($P = 0.01$). It would be interesting to know if these patients also had prophylactic radiation to the ovaries as part of their therapy for primary breast cancer. Patients who received irradiation castration for palliation of advanced breast cancer usually have very poor prognosis. However, occasional patients do survive a long time after radiation castration for recurrent breast cancer. As Case # 8 shows, ovarian cancer can appear many years after radiation castration. The outcome of this case could have been improved significantly if both ovaries had been removed surgically either for castration or when the patient underwent abdominal surgery after the recurrent breast cancer was controlled.

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Will the Art of Medicine Be Destroyed by the Automation of Medical Logic?

THROUGHOUT THE COUNTRY, numerous groups of researchers are attempting to find uses for computers in the medical field. Some attempts have been singularly successful and others hold promise, while the remaining have not been very fruitful. However, it is really not so much a question of "whether computers can become useful to the medical practitioners" but, rather, "in what ways?" In time, the ways will be found and the practitioner will find himself dependent upon a computer located in his office or in some remote site.

This dependency, in general, is not looked upon with favor by the medical practitioner. Indeed, no one really likes to be dependent upon outside resources in the practice of one's profession for, on the surface, this seems to reduce the importance of the individual practitioner and has the effect of restricting him in the practice of his art.

Furthermore, since medicine is more an art than a science, it is frequently argued that computers will be of no value because they are incapable of making artistic judgment.

Despite the valid arguments against the use of computers in the practice of medicine, there seems to be an encroachment taking place by these awful machines and many practitioners feel uneasy, fearing that the whole art of medicine, developed painstakingly over the centuries, will suddenly be destroyed with nothing in its stead but a fragmented, incomplete set of explicit rules which will be incapable of dealing with the world's medical problems.

With this outlook, it is not surprising that many feel attempts to use computers in medicine are of no benefit and, therefore, should be abandoned.

ART, SCIENCE AND COMPUTER

Medicine, as all other areas of man's knowledge, consists of two major components: the "art" and the "science." These are not two sharply divided areas, but, rather, the border-

line between them is hazy and usually indiscernible. Let us define the "science" of medicine as that portion of medical knowledge which has been reduced to explicit rules. The "art" of medicine, then, is that portion of medical knowledge which has not been reduced to explicit rules.

The use of computers in any field of endeavor depends upon the existence of a set of explicit rules, for the computer must be instructed in every minutia if it is to perform properly in every situation which it encounters. Thus, where a set of explicit rules cannot be developed, computers will be of no value. However, where explicit rules in medicine do exist or can be developed, computers will be used.

To restate the above concept, it may fairly well be said that computers will find little to contribute to the "art" of medicine, but they will prove useful in the "science" of medicine. In particular, where the logic of the "science" of medicine is complex and tedious to perform, the computer will find its greatest contribution.

The "art" of medicine will not be invaded by computers. Indeed, this aspect will always need human intuition.

Art as the Precursor of Science

Although I have defined the difference between an art and a science as being related to the extent to which knowledge can be made explicit, I realize the difference is greater than this. It is this aspect, however, which is crucial for the present discussion.

If one looks over the history of the sciences, he will discover that each science has developed from an art. Thus, each science is dependent upon the previous existence of an art. The science of metallurgy developed from the iron-maker's art; the science of chemistry developed from the alchemist's art; the science of astronomy developed from the astrologer's art. The list of art-science progression may be extended to include every modern day science.

There is no area of human knowledge which is completely a science, since no area consists totally of a set of explicit rules stating all that is known about the subject. However, the advancement of knowledge depends heavily upon the existence of a more complete set of explicit statements than existed previously. Even those areas of knowledge which we today commonly call sciences contain an element of art. Indeed, these sciences contain more art today than they did when they were less well developed.

My concept of this development can best be explained by Fig. 1. In the first stage of knowledge concerning any subject (Fig. 1-A), about the only thing known is the fact that the subject matter exists and some intuitive hunches about its characteristics. The center point indicates the existence of the subject and the arrows from that point indicate the intuitive hunches (artistic knowledge) concerning it. The length of the arrows indicate the depth to which human intuition may penetrate the unknown surrounding the subject. There is some limit to which we may penetrate the unknown, beyond which our intuition fails to yield reasonable knowledge.

In Fig. 1-B, the area inside the circle represents the explicit knowledge which we have been able to develop concerning the subject after some time. Beyond the circle, the vast unknown can still be penetrated only to a certain depth by human intuition. The area within the circle may be called the "science" while the area beyond the circle may be called the "art" of the subject under consideration.

The science portion is derived from the artistic portion after many attempts to state in an explicit manner what has been discovered in an implicit manner. The artist, having accomplished a certain act, attempts to repeat it. Once he is able to state in an explicit manner the sufficient and necessary conditions to perform the act, this knowledge enters the science portion of the total knowledge concerning the subject. Having this "hard core" of explicit knowledge, the artist may now proceed to plumb the depths of the unknown from a deeper vantage point (the edge of the circle of scientific knowledge). The unknown becomes known to the extent that human intuition may penetrate it, but the known becomes science only as it can be made explicit and definite. Over a period of time, the science of the subject becomes enlarged and the jumping off point for intuition into the unknown becomes even larger. Fig. 1-C shows a later stage of this process.

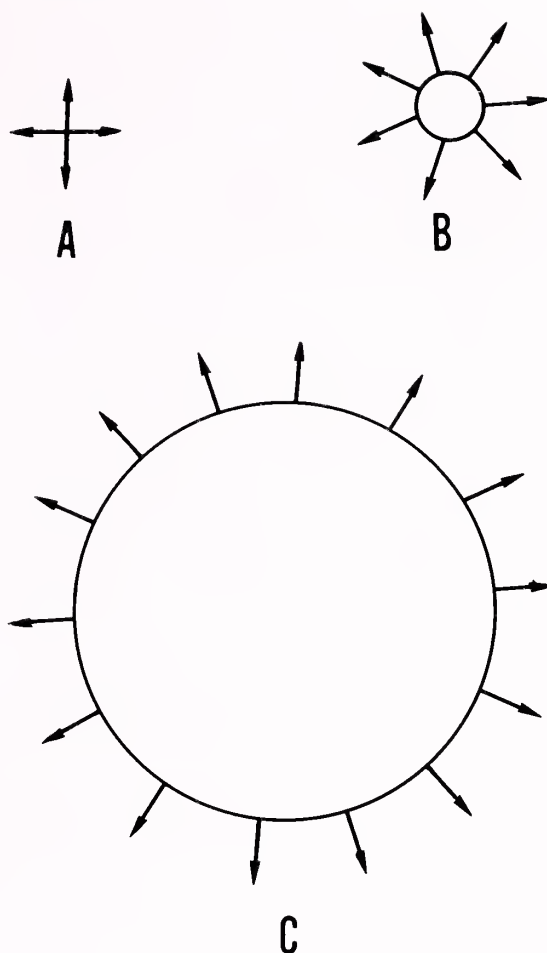


Fig. 1 The growth of knowledge from art to science.

It is to be noticed that Figs. 1-B and 1-C contain three areas: (1) the area inside the circle, which I should like to call the "science" of the area of knowledge; (2) the area outside the circle penetrated by the arrows of human intuition, which I should like to call the "art" of the area of knowledge; and (3) the area beyond the arrows which is all that is not yet known concerning the subject.

With this view of the development of science in mind, one may readily perceive that contrary to popular opinion, science does not destroy art but, rather, enhances and helps to enlarge its domain. The larger the circle of science the greater the area of art. The enhancement and growth of the science of medicine will not decrease the amount of art necessary to practice medicine but, rather, it will increase the art of medicine to an ever larger degree.

Few of the attempts to use computers in medical practice have been successful. The author explores and explains the reasons why. He believes that the increased development of an explicit set of medical logic will allow the physician to employ the power of the electronic computer in his future practice. In so doing, the physician should gain more free time to practice the art of medicine and be less vulnerable to malpractice suits. His patients, also, should benefit from a "uniformly best" decision made in every case. Doctor Watson is Chairman, Department of Biomathematics, Cancer Research Center. This work was supported in part by the Missouri Regional Medical Program and General Research Support Grant # FR-05618-05.

The relation between art and science is symbiotic in the sense that each contributes to the other's growth and without one or the other, knowledge would remain stagnant.

As a simple illustration of this relationship, consider the development of radiotherapy. Before the discovery of X-rays by Roentgen, the knowledge of this area can be represented only by a blank space. Upon Roentgen's discovery, Fig. 1-A may be used to represent the situation. Only the knowledge that the phenomenon exists became known and little more. As time advanced and intuitive ideas were tested, the science of producing these rays increased, giving a larger domain to the artistic portion of knowledge. In this scientific area existed the knowledge that these rays may be employed to make visible the invisible.

During a later period of development, as more explicit knowledge developed, intuition brought forth out of the unknown the concept that these rays also might be employed as medical therapy. Over time, each of these intuitions became further developed along with some explicit rules, thus enlarging again the domain of science and opening up new areas of the art of radiology and radiotherapy.

Today, although the science of radiology and radiotherapy has increased beyond the expectations of the early investigators, the art of these methods has not diminished but, rather, increased. Similar versions of this development may be discovered in any area of human knowledge.

SCIENCE AIDS ART

As long as knowledge remains in the artistic stage, it must be performed by artisans. Also, because teaching an art is more difficult than teaching a science, in the sense that what is being taught is never made explicit and is more difficult to grasp by the student, its application must be more limited. By translating an art into a science, students may more readily learn the subject and, thus, the knowledge will become more available and more meaningful to the entire community.

Furthermore, once knowledge has been made explicit, that portion of it may be executed by technicians, freeing the practitioner from the necessity of applying the science so that he may spend more time in the development of the art. Not long ago, the art of medicine included the ability to perform chemical analysis. This forced the physician into the laboratory and away from his patients. With the development of medical technicians, the physician was able to spend more time with his patients and to consider the more difficult and less well-formulated knowledge applying to the cases at hand.

In this way, then, the development of the science of medicine will allow the physician to become more involved in the art of medicine. In the pursuit of this goal, we see more and more well-defined medical techniques handed over to various types of technicians to perform.

MEDICAL LOGIC

The most difficult area of medical knowledge to make explicit has been the logic of when and why to employ certain techniques. In particular, these are the areas of diagnosis and medical management. The latter, of course, refers to the requisite knowledge, once the diagnosis has been made, to decide the course of treatment.

At the Cancer Research Center, under a project sponsored by the Missouri Regional Medical Program, we are attempting to make a set of explicit statements concerning the medical logic involved in the decisions of treating certain kinds of cancer patients. In particular, the CAMEO (Cancer Management and Educational Optimization) project is concerned with breast cancer patients and colon cancer patients.

The goal of this project is to create a complete set of explicit statements concerning all the factors which must be considered in the medical management of either of these types of patients.

In essence, according to the previous defini-

tions, we are attempting for these two diseases to translate the art of medical management into the science of medical management. This process cannot be completed in a year or a decade, since once the explicit model is available, it can always be improved.

What are the advantages of having a set of explicit statements or rules for the medical management of a given type of patient? There are several.

The first advantage is that the explicit rules of logic may be programmed into a computer for use by the practicing physician. This will in no way lessen the prerogative of the practitioner, but will allow him more free time to employ more prerogatives. In the same way, a mathematician or engineer is freed of the tedious technicalities of multiplying, etc., by the use of a computer and, thereby, allowed to employ more of the art of his profession. For every bit of knowledge which can be stated explicitly, there is some knowledge which cannot. By being relieved of the necessity of considering the obvious, the practitioner will have more time to consider the not so obvious and, thereby, accomplish greater feats.

Secondly, as a result of developing a set of explicit statements, more of the logic in medical management may be communicated among practitioners, giving each a better chance to discover existent flaws or suggest better methods of decision. Thus, the method may be continually improved and strengthened. This process will tend to lead to a more or less "uniformly best" decision procedure for the medical management of a given disease. And since the reason for each decision has been made explicit, it may become more readily testable.

A "uniformly best" decision procedure does not mean that every patient with a given disease will be treated in an identical manner. Rather, the procedure will take account of all the factors necessary to determine the exact treatment to be given. Any factor which is important, in that its presence or absence will alter the treatment of choice, must be considered in the decision procedure. Where debate exists concerning the possible importance of a factor, further data must be collected and analyzed to determine the relative importance of that factor on an objective basis.

Once a "uniformly best" decision procedure (medical logic) has been determined, it would seem beneficial if it were employed by all physicians in the nation. In this way, the soundness of the logic could be rigorously tested by the

analysis of a large amount of uniform data. For example, even though some 30,500 women die each year in the United States of (with) breast cancer, most analytical studies consider generally only a few hundred cases, and it is a "large" study which analyzes 5,000 cases. It would seem that with 30,500 cases a year to analyze, a considerably more rapid advance could be made concerning the "best" medical management for any individual case than is presently being accomplished with smaller studies.

Now it may seem that, were a uniform decision process employed by physicians, the result would be detrimental to both him and his patients.

To see that his patient would benefit, consider that the uniform logic so employed would be based upon a larger number of cases than any individual physician could ever hope to treat in his lifetime. Further, the logic would include factors which have been deemed important by a large number of his colleagues and, therefore, more likely to be complete. Further, the relevancy of each of these factors will have been tested on as large a scale as possible. All of this would add to the expertness and completeness of the decision process employed to determine the treatment for an individual patient. Thus, a benefit to the patient results.

Beyond relieving the physician of collecting certain standard data (which could be obtained by a technician) so that he would have more time to practice the art of medicine, there is another advantage which is appearing to become a large factor in the practice of modern medicine.

Over the past several decades, the physician has found himself more open to legal suits against him on a professional basis. Once a physician has been sued for malpractice, the court brings together a body of medical professionals to set a "standard" against which the jury judges whether malpractice has, indeed, occurred.

Thus, at the time of treating a patient, the physician can never be certain of the "standard" against which he may be judged at a later date since the make-up of the professional witnesses can never be anticipated. In times past, the physician was able to reasonably assume that such witnesses would be drawn from the medical community in which he practiced and, thus, he was in daily contact with and had firsthand knowledge of the expectations of his peers concerning the standards of his profession.

However, in keeping with recent court rulings, professional witnesses may be drawn, and

indeed, are expected to be drawn from the wider medical community of the entire United States. The physician in this situation must now be aware of the opinions of a much larger body of peers. Under these circumstances, it is most difficult, if not impossible, for the physician to become fully aware of the standards against which he may later be judged. Thus, the physician becomes torn between the two horns of the dilemma—of wishing to give his patient the very best medical management of which he is capable, and of practicing conservative medicine in order to protect himself.

It seems that one way out of this dilemma would be the development of a set of explicit rules or decision processes (medical logic) which may be followed under any given set of circumstances. If this were the standard and were approved by a national medical body as the accepted method of management, the physician would be in a more secure position than he is presently. His security would lie in the fact that he would be following a set of procedures already accepted as a standard by the larger medical community.

On the other side of the dilemma, the medical logic must be sufficiently complete and explicit to provide the best available medical management decision for each patient. In order to accomplish this, the decision logic will need to be developed in great detail to assure that it will cover the whole range of problems likely to be encountered.

Further, if this logic is made explicit and is exposed to the medical public, it will be capable of review and revision as more knowledge is obtained.

But any such set of explicit logical statements dealing with only limited subjects as breast cancer or colon cancer will be of sufficient size and

complexity that the practitioner would find it too time consuming to use, if it were written in the form of a text. Indeed, this is probably the most important reason why such a standard has not been developed in the medical field. Whereas the engineer or architect may spend a month or a year perusing handbooks or working out the logic of a problem, the physician must make his decisions in a relatively short time-span lest he fail to treat the numerous other patients needing his services. Thus, up to the present time, there has been no need for the development of explicit, detailed medical logic since it could never have served a useful purpose.

AUTOMATION OF MEDICAL LOGIC

The development of the electronic computer has proceeded rapidly since its introduction in 1945. Indeed, it has increased man's computing capacity somewhere in the realm of six to eight magnitudes (one to 100 million). In general, the only fields of knowledge that have been able to take full advantage of this power are those which have developed highly explicit and detailed logical models (physics, astronomy, engineering, accounting, etc.).

Medicine, as we have seen, has not developed these explicit models for the good reason that they previously could not be used. Today, however, the potential of using such models exists, but there are few such models. Thus, it is time to develop methods which may take advantage of the tremendous computing capacity available today. The development of these logical models will be slow and maybe even painful. However, the advantages to both the patient, who may count on the best medical advice known, and the physician, who may better gauge the standards against which he will be judged and who will have more time to contribute to the art of medicine, will more than pay for the effort.

MISSOURI MEDICINE welcomes comments and contributions from its readers. Correspondence should be addressed to the Editor with the understanding that such correspondence may be rejected or published (in entirety or in part) at the discretion of the Editor. With the exception of scientific papers, correspondence usually cannot be acknowledged or returned.

President's Message

Among the most pleasant tasks associated with the presidency of the MSMA is visiting the various Councilor Districts. Certainly, the warmth and many courtesies extended to Field Secretary Royal O. Cooper and me by physicians and their wives throughout the state is memorable. No apathy about current issues is apparent. In every instance to date, Councilors apparently have been communicating with constituents and attendance at each meeting has been remarkable.

At several district meetings, it has been my pleasure to be on the program with a young spokesman from the Department of HEW, Mr. Allan Bloom. Mr. Bloom has discussed Health Maintenance Organizations (HMO's) and has spoken with clarity and enthusiasm for this type of health care delivery system. Needless to say, the current national administration is pushing hard for such a system. Government spokesmen have suggested that HMO's should be available to 90% of American citizens by 1980. Nothing to date suggests that the administration is insisting on a monolithic delivery system such as in the Kennedy bill. However, HMO's still lack definition.

Editorially, I see only the insertion, through HMO's, of management and regulation to health care with no new health dollars and, certainly, reduction of costs *only* by cutting quality of care and reducing services. To date, there is no proof that this type of system will deliver care effectively to those areas in which health care is not now possible or available. With few exceptions, doctors have asked challenging questions (sometimes heated) concerning HMO's. Positively in Springfield, that great group of Missouri physicians presented a front of evident resistance, if I interpret correctly.

Down in the Mineral Area in Salem, where Dr. E. A. Stricker is Councilor, Dr. Hector W. Benoit, Jr., staff and I were received with hospitality-plus. The physician-community involvement was omni-evident. I noted this with sincere nostalgia and an urge to get back to the country. Physicians and wives flew and drove from distant areas. Doctor Benoit, as usual, eloquently presented the case of the Health Care Foundation (HCFM) and Peer Review. I sensed a sincere acceptance of the HCFM and, in general, harmony concerning the appropriateness of physician-dominated peer review.

The trip to Columbia for the Fifth District meeting, hosted by Councilor Joseph C. Cope, was most delightful, again with a discussion of the political socio-economics issues. Most . . . and I repeat, most . . . impressive was the concerned, participating presence of a host of educators from the University of Missouri, along with practicing physicians and their wives from that district.

Dr. Louis P. Hetlage, energetic and capable young Councilor for the Fourth District, by virtue of communication with effort was rewarded with a good mix of city and suburban physicians and wives to listen to Mr. Bloom speak about the HMO's. The response was interestingly volatile with a little "pro" and considerable "con." If you haven't read Dr. Lawrence O'Neal's editorial on HMO's in a recent issue of *St. Louis Medicine* (and reprinted on page 902 of this issue of *MISSOURI MEDICINE*), please do. In my opinion, it is required M.D. reading.

The privilege of appearing as the MSMA representative on a panel recently at the Missouri State Hospital Association's Annual Meeting served to emphasize the multiplicity of hospital problems and how intensely hospitals and physicians need each other if we are to effectively resolve many of the current pressures and problems (not crises) of the health industry. The AHA is still flexibly altering its Ameriplan for NHI.

Well, I must go pack. I hope to usurp the privilege of visiting most districts if time and tissue allow before the year expires. My travels only further assure me of the greatness of our profession and serve to emphasize the character, capacity and empathy of the vast majority of professionals in this area.



Gerald L. Miller, M.D.

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or driving a motor vehicle. **Precautions:** Isophedrine-containing preparations should be used with caution in the presence of: hypertension; coronary artery disease; any other cardiovascular disease; glaucoma; prostatic hypertrophy; hyperthyroidism; diabetes. **Adverse Reactions:** The physician should be alert to the possibility of all possible adverse reactions which have been observed with sympathomimetic and antihistaminic drugs. These include: drowsiness; confusion; restlessness; nausea; vomiting; drug rash; vertigo; palpitation; anorexia; dizziness; dysuria due to vesicle sphincter spasm; headache; insomnia; anxiety; tension; weakness; tachycardia; angina; sweating; blood pressure elevation; mydriasis; gastric distress; abdominal cramps; central nervous system stimulation; circulatory collapse. **For more complete details, consult package insert or Schering literature available from your Schering Representative or Medical Services Department, Schering Corporation, Kenilworth, New Jersey 07033.**

Woman's Auxiliary



Merry Christmas!

The holiday season is the season for rejoicing. It's the time for reflection. Most important, the meaning and spirit of Christmas is so alive and real and precious that we all suddenly find ourselves thinking the same thoughts of gratitude, fellowship and worship. We strive to fully express what is in our hearts and minds.

As members of the Woman's Auxiliary to the Missouri State Medical Association, we have many blessings to count. The Auxiliary provides special opportunities throughout each year for us to serve God through our efforts to help our fellowman.

I am confident all members of the Auxiliary will join me in this prayer at Christmastime:

Thank You, Lord

... for this opportunity to be a part of and to contribute to the goals of our husbands' important profession, the practice of medicine.

... for helping us give to life instead of only take from it.

... for this opportunity to share with other Auxiliary and State Medical Association members the good will and joy of fellowship in working together to help solve our community, state and national health problems.

... for the inspiration that results from our involvement or "involving ourselves" for the good health and welfare of others who are less fortunate than we.

... for a life that is meaningful and, thus, happy.

... for the privilege of being Americans.

Merry Christmas to the MSMA from the MSMA Woman's Auxiliary! May the spirit of this season be with you always.



Mrs. Frank J. Valach
President

County Society News

FIRST DISTRICT

COUNCILOR

JOHN N. MARTIN, M.D., ST. JOSEPH

BUCHANAN COUNTY MEDICAL SOCIETY

The annual election meeting of the Buchanan County Medical Society followed a dinner at the Ramada Inn in St. Joseph on October 6. Thirty-five physicians attended the meeting at which President Sharon E. Waggoner presided.

Officers elected to serve in 1972 are Drs. Elza F. Butler, President-Elect; Randal W. Weed, Vice-President; William B. O'Connor, Secretary; and Robert W. Kieber, Treasurer. Doctor Kieber will serve his 19th consecutive term in this office.

Dr. G. Tyson Carpenter was named to the Board of Censors for a three-year term. Dr. Allen I. Herman was elected Delegate to the MSMA for a two-year term. Drs. R. Philip Acuff, William B. Rost and Donald J. Stallard were elected Alternate Delegates.

Dr. Edmund W. Kline was reelected to the Committee on Public Policy. Dr. John T. Rogers was named a Trustee until 1977 and Dr. Sharon E. Waggoner, President in 1971, was elected to the Executive Secretary Committee.

The newly-elected officers and Dr. Lawrence H. Pifer, President-Elect for the past year, will be installed at the Society's annual dinner and meeting in December.

RANDAL W. WEED, M.D., *Secretary*

GRAND RIVER MEDICAL SOCIETY

The Grand River Medical Society met at the Strand Hotel in Chillicothe on October 14 with 16 physicians, Auxiliary members and guests present.

Dr. George Gary introduced his guests, Dr. and Mrs. George and Dr. and Mrs. Galvez of Marceline.

The Society's scientific program was presented by Christopher Thomas, M.D., general surgeon from Kansas City, who discussed renal dialysis and transplantation. The Auxiliary's program was given by Mabel Cramer of Chillicothe.

At the business meeting, a discussion was held regarding the Missouri Regional Medical Program and Green Hills Regional Medical Program who are to sponsor scientific programs in November. The programs would include a session in the afternoon for supporting personnel from the hospitals and a scientific program in the

evening for the physicians. It was decided that the Program Chairman should make the arrangements.

The following officers were elected for 1972: Drs. Joseph Conrad, President; E. W. Allen, First Vice-President; Donald Dowell, Second Vice-President; John Dixon, Chairman, Program Committee; and Frank R. Daley, Secretary.

It was tentatively planned to hold the annual Christmas party at the Strand Hotel.

There was a discussion regarding the Associate Degree in Nursing program to be instituted at the Trenton Junior College and all member hospitals. Physicians were urged to participate in sponsoring this program.

It was announced that Dr. Oliver Duffy of Trenton had been elected to the Trenton Chamber of Commerce Hall of Fame.

Mr. Galen Cooper of G. D. Searle Co. was in charge of the social hour.

FRANK R. DALEY, M.D., *Secretary*

SECOND DISTRICT

COUNCILOR

LYSLE M. BACH, M.D., HANNIBAL

CHARITON-MACON-MONROE-RANDOLPH COUNTY MEDICAL SOCIETY

The regular meeting of the Chariton-Macon-Monroe-Randolph County Medical Society was held on October 14 at the Woodland Hospital Medical Library.

President J. W. Fleming, Jr. presided and arranged the program. He introduced Leonard L. Politte, M.D., an internist with subspecialty in cardiology who is in the private practice of medicine in Columbia. His subject was "Indications for and Problems of the Pacemaker." Doctor Politte also discussed cardioversion in ventricular tachycardia, atrial flutter and cardiac arrest.

A guest at the meeting was Dr. A. P. Rowlette, who was chief surgeon at Woodland Hospital for many years. Doctor and Mrs. Rowlette now live in Fort Meyers, Fla.

Members present were Drs. D. E. Eggleston, James E. Campbell, Macon County; F. A. Barnett, Monroe County; F. L. Harms, Chariton County; J. W. Fleming, Jr., T. S. Fleming, Robert H. Young, W. D. Chute, C. C. Cohrs, L. E. Huber, R. V. Thompson and G. R. Hudson, Randolph County.

W. DEWARD CHUTE, M.D., *Secretary*

NINTH DISTRICT

COUNCILOR

E. A. STRICKER, M.D., ST. JAMES

SOUTH CENTRAL COUNTIES MEDICAL SOCIETY

The South Central Counties Medical Society suspended its regular monthly meeting in October so that members could attend the Ninth Councilor District Meeting as a group at the Tower Motel in Salem.

The Ninth District meeting was hosted by Councilor and Mrs. E. A. Stricker of St. James. MSMA President Gerald L. Miller and Past-President Heeter W. Benoit, Jr. were present and gave interesting and stimulating reports.

County Society members who attended the meeting included President and Mrs. Rollin H. Smith, Dr. and Mrs. C. W. Cooper, Dr. and Mrs. James Hasek, Dr. and Mrs. Martin Hasek, Dr. and Mrs. C. F. Smith, Dr. and Mrs. M. L. Fowler, Dr. and Mrs. Jack Wiles and Dr. W. T. Morgan.

The next meeting of the Society will be on Dec. 1, 1971 at the Holiday Inn in West Plains. Brewster Harrington, M.D., cardiovascular surgeon from Memphis, Tenn. will be the speaker.

JACK N. WILES, M.D., *Secretary*

TENTH DISTRICT

COUNCILOR

EUGENE T. HANSBROUGH, M.D.,

POPLAR BLUFF

MINERAL AREA MEDICAL SOCIETY

The October 25 meeting of the Mineral Area Medical Society began with a social hour and banquet in association with attorneys from the judicial circuit. Following the banquet, Congressman William Burlison addressed the meeting. His subject was "Proposed Federal Medical Legislation."

Dr. Edward Mardini, President, conducted the business meeting at which Dr. Eugene T. Hansbrough, Councilor, discussed the Tenth District Meeting scheduled on November 21 in Poplar Bluff. He stated that the meeting will open with a seminar on cancer and will include a dinner honoring Dr. Gerald L. Miller, President of the MSMA. Dr. Richardson K. Novak, Dean of the University of Missouri-Kansas City School of Medicine, will be the featured speaker.

Mr. Royal O. Cooper, MSMA Field Secretary, commented about joint billing with the Missouri Medical Political Action Committee, pointing out the advantages to both the doctors in the area and the Committee.

It was moved by Dr. Charles W. Chastain that



(Left to right) Mineral Area Medical Society President Edward Mardini and Secretary C. W. Chastain listen as Tenth District Councilor Eugene T. Hansbrough discusses the District meeting on November 12.

the Society's annual dues be increased to \$10.00. His motion was seconded by Dr. F. R. Crouch and was passed unanimously.

At the election of officers, it was moved by Doctor Chastain and seconded by Dr. Charles H. Appleberry that Dr. Robert Dettmer be nominated for President. It was moved by Dr. Van W. Taylor that nominations cease and the election be by acclamation. Doctor Crouch seconded the motion and it was passed unanimously. Dr. Norma D. Farmer was elected Vice-President and Dr. Kirby L. Turner was elected Secretary by the same procedure.

Doctor Crouch moved that the Mineral Area Medical Society approve joint billing so that future statements for the Society's annual dues will include the dues for membership in the Missouri Medical Political Action Committee. Doctor Chastain seconded the motion and it was passed unanimously.

There being no further business, the meeting was adjourned.

C. W. CHASTAIN, M.D., *Secretary*

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New Members

Robert F. Bort, M.D., 803 Stadium Rd., Columbia, has become a member of Boone County Medical Society. Dr. Bort is a native of Alton, Ill., received his preliminary education at Western Illinois University and his M.D. degree at the University of Illinois in 1961. He specializes in psychiatry.

Jose L. Castillo, M.D., Missouri Delta Community Hospital, Sikeston, has become a member of SEMO County Medical Society. Dr. Castillo is a native of Camaguey, Cuba, received his preliminary education in Havana, Cuba and his M.D. degree at the University of Salamanca in 1965. He specializes in radiology.

John P. Christy, M.D., 623 Pine Blvd., Poplar Bluff, has become a member of Butler-Wayne-Ripley County Medical Society. Dr. Christy is a native of Gary, Ind., received his preliminary education at Washington University and his M.D. degree at Washington University in 1963. He specializes in general surgery.

Kevin E. Curran, M.D., 1805 Federal Reserve Bank Bldg., 925 Grand Ave., Kansas City, has become a member of Jackson County Medical Society. Dr. Curran is a native of Kansas City, Kan., received his preliminary education at the University of Notre Dame and his M.D. degree at the University of Missouri in 1965. He specializes in ophthalmology.

Walter F. Davisson, Jr., M.D., 913 Leslie Blvd., Jefferson City, has become a member of Cole County Medical Society. Dr. Davisson is a native of St. Louis, received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1965. He specializes in ophthalmology.

Carl F. Dennison, M.D., 11745 Olive, St. Louis, has become a member of St. Louis County Medical Society. Dr. Dennison is a native of Denver, Colo., received his preliminary education at Notre Dame University and his M.D. degree at Washington University in 1968. He is in general practice.

Royal S. Garner, M.D., 1804 Southwest Blvd., Jefferson City, has become a member of Cole County Medical Society. Dr. Garner is a native of Richmond Heights, received his preliminary education at the University of Missouri and his M.D. degree at the University of Missouri in 1968. He is in general practice.

Martin T. Greenberg, M.D., 2310 E. Linwood Blvd., Kansas City, has become a member of Jackson County Medical Society. Dr. Greenberg is a native of Norfolk, Va., received his preliminary education at Duke University and his M.D. degree at the Medical College of Virginia in 1967. He specializes in internal medicine.

Duane Hagen, M.D., 1221 S. Grand, St. Louis, has become a member of St. Louis County Medical Society. Dr. Hagen is a native of Hardin, Ill., received his preliminary education at St. Louis University and his M.D. degree at St. Louis University in 1960. He specializes in psychiatry.

Ronald T. Hill, M.D., Route 3, Dexter, has become a member of SEMO County Medical Society. Dr. Hill is a native of Cape Girardeau, received his preliminary education at Southeast Missouri State College and his M.D. degree at the University of Missouri in 1964. He specializes in general surgery.

Aram Lila, M.D., 1509 W. Truman Rd., Independence, has become a member of Jackson County Medical Society. Dr. Lila is a native of Ubol, Thailand, received his preliminary education at the University of Medical Sciences and his M.D. degree at the University of Medical Sciences in 1965. He specializes in internal medicine.

James P. McGonigle, M.D., 2401 Jackson, Joplin, has become a member of Jasper County Medical Society. Dr. McGonigle is a native of St. Louis, received his preliminary education at Santa Clara University and his M.D. degree at St. Louis University in 1965. He specializes in ophthalmology.

Gregorio L. Rodriguez, M.D., 103 N. Main, Charleston, has become a member of SEMO County Medical Society. Dr. Rodriguez is a native of Manila, Philippines, received his preliminary education at Letran College and his M.D. degree at the University of Santo Tomas in 1962. He specializes in general surgery and general medicine.

Sarvotham K. Reddy, M.D., 623 Pine Blvd., Poplar Bluff, has become a member of Butler-Wayne-Ripley County Medical Society. Dr. Reddy is a native of Hyderabad, India, received

his preliminary education at City College and his M.D. degree at Osmania Medical College in 1961. He specializes in general surgery.

Johannes Schokker, M.D., 2009 E. McCarty, Jefferson City, has become a member of Cole County Medical Society. Dr. Schokker is a native of Almelo, Holland, received his preliminary education at Hope College and his M.D. degree at the University of Michigan in 1966. He specializes in general surgery.

Davie L. Straub, M.D., Medical Arts Bldg., Joplin, has become a member of Jasper County Medical Society. Dr. Straub is a native of Horton, Kan., received his preliminary education at the University of Kansas and his M.D. degree at the University of Kansas in 1966. He specializes in pediatrics.

Yeldandi A. Surainder, M.D., 9406 E. 63rd, Raytown, has become a member of Jackson County Medical Society. Dr. Surainder is a native of Hyderabad, India, received his preliminary education at Nizam College and his M.D. degree at Osmania Medical School in 1961. He specializes in pediatrics.

Dasari Suseela, M.D., 2310 E. Linwood Blvd., Kansas City, has become a member of Jackson County Medical Society. Dr. Suseela is a native of Nuzvid, India, and received her M.D. degree at Guntur Medical College in 1967. She specializes in pediatrics.

George Yip Min Wang, D.O., 600 E. 22nd, Kansas City, has become a member of Jackson County Medical Society. Dr. Wang is a native of Hong Kong, received his preliminary education at Albion College and his D.O. degree at the Des Moines College of Osteopathic Medicine and Surgery in 1966. He specializes in psychiatry.

Robert L. Willcoxon, M.D., Medical Arts Bldg., Joplin, has become a member of Jasper County Medical Society. Dr. Willcoxon is a native of Wichita, Kan., received his preliminary education at St. Louis University and his M.D. degree at the University of Kansas in 1965. He specializes in general surgery (vascular & thoracic).

Sharon L. Woodruff, M.D., 5400 Arsenal, St. Louis, has become a member of St. Louis County Medical Society. Dr. Woodruff is a native of Dallas, Tex., received her preliminary education at Southern Methodist University and her M.D. degree at Washington University in 1965. She specializes in neurology and psychiatry.

In Memoriam

Ellis, Calvin C., M.D., St. Louis, a graduate of Washington University, 1941; member St. Louis County Medical Society; age, 58; died Sept. 28, 1971.

Burns, Thomas J., M.D., Springfield, a graduate of University of Utah, 1944; member Greene County Medical Society; age, 53; died Sept. 30, 1971.

Rice, Earl R., M.D., Ft. Lauderdale, Fla., a graduate of the University of Pennsylvania, 1918; member St. Louis Medical Society; age, 77; died Sept. 30, 1971.

Atcheson, Bellfield, M.D., Kansas City, a graduate of Rush Medical College, 1927; member Jackson County Medical Society; age, 69; died Oct. 14, 1971.

Nicolay, Kenneth S., M.D., Kansas City, a graduate of the University of Kansas, 1945; member Jackson County Medical Society; age, 50; died Oct. 19, 1971.

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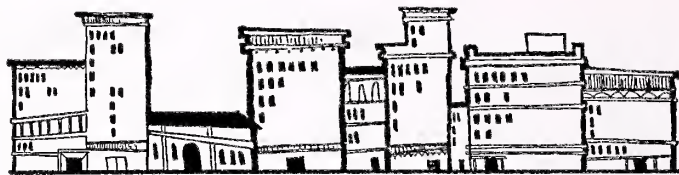
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From the Medical Schools



UNIVERSITY OF MISSOURI-COLUMBIA

Dr. William D. Mayer, director of the University of Missouri-Columbia Medical Center and dean of the School of Medicine, was elected to



Dr. Mayer

the executive council of the Association of American Medical Colleges at the association's 82nd annual meeting held October 28-November 1 in Washington, D. C. He is currently serving as a member of the association's committee on financing medical education and as chairman of the association's Midwest-Great Plains region made up of the 27 medical schools in the midwest.

The Association of American Medical Colleges represents the 108 medical schools in the U. S., Canada and Puerto Rico, 400 of the largest teaching hospitals in this country and 47 academic societies in the health area with a combined membership of more than 90,000 physicians and scientists. The executive council to which Dean Mayer was elected is the highest elective body of the association and is charged with the responsibility of carrying out the business of the association between its annual meetings. There are 19 members of the executive council.

Dean Mayer, an honors graduate of the University of Rochester School of Medicine in 1957, came to the University of Missouri from Rochester in 1961 as assistant professor of pathology and assistant dean of the School of Medicine. He was appointed director of the medical center and dean of the School of Medicine in 1967. He is currently serving as a member of the executive committee of the National Board of Medical Examiners and as chairman of its goal and priorities committee. He also is chairman of the national review committee on regional medical programs of the Department of Health, Education and Welfare.

Dr. Howard C. Hopps, Curators' professor of pathology at the School of Medicine, has been appointed a short-term consultant to the World

Health Organization (WHO). His principal duty as a consultant will be to assist in planning and conducting a seminar on the ecology of disease (also called geographic pathology) to be held December 1-10 in Manila. Doctor Hopps is the only consultant selected from the western hemisphere.

The conference is the first regional seminar of its kind to be held on the "Methods of Epidemiological Surveillance and Geographic Pathology." Scientists from around the world will attend to discuss the distribution of diseases and their possible relationship to substances that occur naturally in the environment.

Dr. John F. Maher, professor of medicine and director of the Division of Nephrology, is co-author of a new book, "The Kidney: Structure and Function in Disease," published by Williams and Wilkins Company, Baltimore.

The 207-page book correlates physiology and pathology with clinical disorders, thus relating clinical medicine to the basic sciences for medical students, interns and residents. The book also will be of interest to practicing internists, urologists and pathologists. Co-author is *Dr. Abner Golden*, professor and chairman of the Department of Pathology at Georgetown University, Washington, D. C.

This work is Dr. Maher's second published book. His first, "Uremia: Biochemistry, Pathogenesis and Treatment," appeared ten years ago. The 42-year-old physician also has had 83 articles published in medical and scientific journals.

ST. LOUIS UNIVERSITY

Dr. Francis X. Lieb, a 1948 alumnus of the St. Louis University School of Medicine, has been elected president of the St. Louis University Medical Alumni Association. He succeeds *Dr. Henry E. Oppenheimer*, a 1935 medical alumnus.

Dr. Richard K. Danis has been elected secretary. Elections are for a two-year period.

Named to three-year terms as members of the board of directors were *Drs. Joseph G. Nouhan*, *William I. Stryker* and *John H. Winter*. Medical alumni serving two-year terms are *Drs. Vincent*

J. LoPiccolo, Donald A. Bindbeutel and Richard K. Danis. Serving as one-year board members are *Dr. Louis Keller* and *Dr. Bray O. Hawk.*

University School of Medicine alumni numbers 4,600. A total of 940 are in the St. Louis metropolitan area.

Dr. Donald R. Judd, associate clinical professor of surgery, has been elected president of the St. Louis University Hospitals medical and dental staff. His term of office is for a one-year period. He succeeds retiring president *Dr. Robert H. Ramsey*, assistant clinical professor of internal medicine, a 1954 alumnus of the School.

Others elected were *Dr. Edward W. Wittgen, Jr.*, vice-president, and *Dr. Edward Eyerman, Jr.*, new secretary and treasurer. Doctor Wittgen is assistant clinical professor of orthopedic surgery at the School of Medicine. Doctor Eyerman is assistant clinical professor of neurology.



Dr. Francis X. Lieb, newly elected president of the St. Louis University Medical Alumni Association (*left*), congratulates retiring president *Dr. Henry E. Oppenheimer*. Looking on is *Rev. Paul C. Reinert, S.J.*, University president, who presented a plaque of appreciation to Doctor Oppenheimer.

Continuing Education Coming Events

- | | |
|------------|--|
| Dec. 6-8 | Symposium: Gynecology and Obstetrics
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Dec. 8-10 | Comprehensive Care in the Arthropathies
Danciger Institute for Health Sciences
Menorah Medical Center, Kansas City 64110 |
| Jan. 12-13 | Postgraduate Symposium: Practical Obstetrics and Gynecology
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Jan. 12-14 | Comprehensive Care in Pulmonary and Infectious Diseases of the Chest
Danciger Institute for Health Sciences
Menorah Medical Center, Kansas City 64110 |
| Feb. 2 | Office Pediatrics
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Feb. 7-8 | Symposium: Cardiac Auscultation
Postgraduate Medical Education
K.U. School of Medicine, Kansas City, Kan. 66103 |
| Feb. 16-17 | Orthopedic Conference
Continuing Education, M.U. School of Medicine
Columbia 65201 |
| Feb. 17-18 | Recent Advances in Emergency Room Medicine
Danciger Institute for Health Sciences
Menorah Medical Center, Kansas City 64110 |

The Council Reports

(Continued from page 909)

Dr. Hetlage, Fourth District, stated that since this is his first term of office, he needs to become better acquainted with the members in his district. During the summer, he attempted to attend meetings of his county societies and additional meetings with their presidents, as well as the Council meetings of the St. Louis County Medical Society. He stated that from observing his rural societies, he noted two primary factors—one, the members isolation from academic environment; two, the lack of G.P.'s. He said he noted a dissatisfaction on the part of some physicians, not only in organized medicine as a whole but, also, in representation by the MSMA and AMA. Some indicated a willingness for a higher degree of involvement in the state association, but do not know how to go about it. He said he found a great number of interested physicians who are never asked to serve and suggested a reappraisal of the state medical association's committee appointment policy as well as election policies.

Dr. Hetlage spoke briefly regarding the rumored amalgamation of St. Louis Medical Society and St. Louis County Medical Society. He also mentioned a proposed Bi-state Federation which would include the entire Fourth Councilor District, the Third Councilor District and a few counties in Illinois.

Dr. Hetlage read a resolution regarding coordination of benefits by insurance companies. When two insurance policies are involved, they will pay a comparative portion of the cost. He noted that this involves a great deal of paper work and delay in payment for both the physicians and the patients. He suggested that the Council go on record as favoring the investigation of these practices and that this problem be referred to an appropriate commission for consideration and evaluation. The Chairman referred this matter to the Commission on Medical Economics and Third Party Medicine.

Dr. Franklin stated that the hospitals in the St. Louis area received a communication from Blue Cross regarding the Federal Employee Program which included coordination of benefits and indicated that on all claims, it must be noted whether the patient has other health coverage. The coordination of benefits exclusion applied to both inpatient and outpatient care. Dr. Miller stated that in 1970, the FEP went into the hole about \$75 million. It also was stated that the physicians will receive a communication on this subject from Blue Shield in the very near future.

After further discussion, on motion of Dr. Miller, duly seconded, the Council agreed that this matter of the study of our current organizational structure be submitted to the Planning Committee for thorough study and assessment with recommendations to be brought back to the Council.

Dr. Cope, Fifth District, reported that a meeting on HMO's held at Columbia had an attendance of 134 people. Considerable interest was shown in that area. He also reported that Boone County Medical Society met with a group of lawyers and had an interesting meeting. Dr. Cope also reported that the Boone County Hospital was inspected by the JCAH and was given a set of 37 suggestions which were unrealistic and would only result in an increase in cost without any real benefit to the patient.

Dr. Cope also mentioned that a urologist group hired a physician's assistant who was trained as a Corpsman in the Navy and had had further training of 1,000 hours as a G.U. technician, plus two years experience. He stated that he is good, but asked what is to keep him from going out on his own to practice G.U.

Dr. Chandler, Seventh District, reported that the Planning Committee of the Jackson County Medical Society presented extensive revisions to the Council of JCMS which were accepted at its meeting on August 23. Some of the proposals included more responsibility for the younger men and stimulation for the older men who do not participate in organized medicine; recruitment programs for all physicians who do not belong to the Society; Council seat available to student bodies; establishing a Board of Directors consisting of representatives of medical staffs of community hospitals; an Executive Committee which would handle most of the work now performed by the Executive Council. The Planning Committee also recommended eliminating all nonworking committees, limiting the standing committees to those which are known to have continuous responsibilities and the appointment of ad hoc or task force committees and disbanding them when their work is completed; also eliminating the three-member, three-year term provisions relating to committees. The Planning Committee also recommended changing the title of the Executive Secretary to Executive Vice-President with his actions accountable to the Executive Committee.

Dr. Bradshaw, Sixth District, reported that the Division of Health is working on some of the problems reported by President Miller. They are being studied and will be continued. He also reported problems with Comprehensive Health Planning in the Sixth District. He stated that after a ten-day spurt, they have heard nothing further on the state level.

Dr. Bradshaw also reported that one of the C.O.'s from the University of Missouri will be working with him in his office for at least a year. He also mentioned that the Sixth Councilor District will meet in Warrensburg on October 27, with Senator Cason as the guest speaker. An invitation to attend was extended to President Miller.

Dr. McAlhany reported that the Eighth Councilor District met in Springfield on September 9 with President Miller and Mr. Alan Bloom of HEW as guest speakers. Mr. Bloom spoke on HMO's and gave the doctors a better insight into what Health Maintenance Organizations are all about. It was a worthwhile meeting. He also reported that Greene County joined its local "Community Organization for Drug Abuse Control" (CODAC) in which Dr. Crawford is very active. This is one of the community organizations composed of civic organizations, churches, PTA's and other business leaders. They have an executive secretary and will get underway about October 1.

Dr. McAlhany reported also that the Woman's Auxiliary of Greene County will sponsor their second Health Careers Fair in October to try to interest younger people in entering paramedical fields.

Dr. McAlhany asked Mr. Gary Schnedler to explain the new brochure developed by Greene County for distribution to all newcomers in the Springfield area. Mr.

Schnedler distributed copies to the Councilors. He stated that each member was assessed \$35 for a two-year pilot study. He said the brochure is sent to all newcomers from a list obtained monthly from the utilities company. It also is placed in all of the doctors' offices. The doctors receive a plaque to hang in their offices stating that they are members of Greene County Medical Society. Also, a questionnaire is being developed which will be distributed to the members personally so that opinions can be secured on how to improve the county medical society and organized medicine in general. After two years, this information will then be turned over to a Planning Committee for evaluation and to determine what new direction should be taken.

On motion of Dr. Bradshaw, duly seconded, the Council commended the Greene County Medical Society in this endeavor.

Dr. Bradshaw then brought up the subject of abortions in Western Missouri. He pointed out that a number of Missouri residents are going across the state line into Kansas to have abortions performed and his main concern is the high cost paid by the patients which run from \$700 to \$900.

After further discussion, on motion of Dr. Cope, duly seconded, it was agreed that a letter be written to the President of the Kansas Medical Society requesting that they look into this matter and that a copy of the letter also be sent to the GYN Society in Wichita, Kan.

Dr. Stricker reported that the Ninth Councilor District will hold its district meeting on October 20 in Salem.

Dr. Hansbrough reported that the Tenth Councilor District Meeting will be held in conjunction with the Southeast Missouri Cancer Conference on November 21 in Poplar Bluff. He also reported that there are two cardiac care units in his area: one has been in operation for about ten years and provides a total of six beds; the other unit, which accommodates two patients, is in a hospital in a smaller town.

Dr. Hansbrough stated that he thought the Council District reports were good and most interesting.

DEANS' REPORTS

Dr. Mayer, University of Missouri-Columbia, stated he was very interested in some of the discussions he had heard from the Councilors.

Dr. King, Washington University, said it was a pleasure to be there and it was the most interesting reporting he had heard. He stated that he thought Dr. Fisher had a good suggestion and hoped somebody would put it to good use.

Dr. Noback, University of Missouri-Kansas City, reported that the new Kansas Medical School had 40 students in the first year of the six-year program combining Baccalaureate and M.D. degrees; 18 in the second year and 36 regular medical students, for a total of 94 students for whom they are responsible. He said that they are all busy with three weeks in their first full year. He said things are going very well and appreciated the help received from the Council and Officers. He stated that the 36 medical students include 23 who finished their regular college medical work, 13 students with advance training in a variety of subjects, four Ph.D.'s, one student with advance training from Dr. Mayer's program, several with a year in dental school and another with a year in the osteopathic school in Kansas City.

There are eight women and 28 men students. He

stated that the school set up a two-day orientation program for these 36 students. They toured Hospital Hill, which is a very important part of their training, and other related hospitals in the area. On the second day, they took a bus tour of the whole community, since medicine is a total part of the community. Dr. Stricker commented that it appears that the Kansas City Medical School is off the ground to a good start.

AD HOC COMMITTEE ON 114TH ANNUAL SESSION

Mr. Fox gave a brief report on progress to date on arrangements for the 114th Annual Session at the Muehlebach Hotel in Kansas City on April 6-9, 1972, in the absence of Chairman Dr. Kinsella of the Program Committee. Mr. Fox stated that the program committee agreed on a new format utilizing the specialty representatives serving on the MSMA Inter-specialty Commission. He said 17 of the 22 specialty organizations accepted invitations to sponsor programs, some of them joining together for programs. At this point, they have confirmation that they have officially accepted the day and time slots assigned to them. There will be five or six concurrent sessions. He stated that it will be interesting to see how many of their own members will attend (also the age factor) now that they are planning their own programs and running it themselves. He stated that the opening session will be on Peer Review and the Health Care Foundation will develop the program. The opening sessions on Saturday morning will be on Comparative Costs of Medical Care and on HMO's.

After discussion, Dr. Cope mentioned that after the last meeting, Dr. Fisher suggested we officially involve the medical students in medicine. Dr. Cope said he would like to suggest that the MSMA invite the medical students to attend the state meeting as guests and prior to the House of Delegates, a caucus room be procured for these students. The students should be assigned one delegate per medical school and this delegate should be an official delegate and sit with and vote with the delegation in which his school is located.

It was pointed out there was only one objection to this idea, which is that we do not want to be in a position of organizing the medical students.

After further discussion, on motion of Dr. Fisher, duly seconded, it was agreed to refer this item to the Committee on Long Range Planning for further study.

Dr. Franklin mentioned that he spoke to Dr. Kinsella, Chairman of the Program Committee for the Annual Session, and congratulated him on the proposed program. He said Dr. Kinsella told him Mr. Fox was to be complimented for handling all the details.

On motion, duly seconded, the Council accepted the Report of the Ad Hoc Program Committee on the 114th Annual Session.

AD HOC COMMITTEE ON HEALTH MANPOWER

In the absence of the Chairman, Dr. Worley, Mr. Fox reported for the Ad Hoc Committee on Health Manpower. He stated that discussion pointed up the need for a mechanism to solve problems of mutual interest between medicine and nursing. The Missouri Nurses Association submitted a list of six such problems for consideration, as follows: (1) Statement on starting blood transfusions without physician in attendance; (2) Advisability of adding drugs to IV fluids (should this be done by pharmacist or nurse); (3) Should a nurse do indotracheal intubation; (4) Should

a nurse give cardiac drugs directly into cardiac muscle; (5) Upon patient's admission into hospital, can a routine blood, urinalysis and Chest X-ray be done without doctor's orders; and (6) In chronic hospitals and nursing homes, due to shortage of doctors, nurses have been called upon to pronounce patients dead. Nurses do not want the responsibility.

It was stated that if the medical profession would like to continue these services performed by the nursing profession, a proper directive should be issued with corresponding guidelines written by the physicians for the nurses. It was suggested that an Advisory Committee be formed to work with the Ad Hoc Committee on Health Manpower to study the six items referred to above along with other problems as they arise in the future.

After further discussion, on motion of Dr. Miller, duly seconded, it was agreed that an Advisory Committee be established to be composed of a representative of the Missouri Nurses Association; Missouri League for Nursing, Inc.; Missouri State Board of Nursing; Missouri State Association of Licensed Practical Nurses; the Missouri Federation of Licensed Practical Nurses; and the Missouri Hospital Association, with the recommendation that, in view of the projected changes in the Nursing Act, that this committee work closely with the Legislative Committee and that the problem in the First Councilor District, which Dr. Martin reported, be placed on the agenda when the Advisory Committee meets.

On motion, duly seconded, the report of the Ad Hoc Committee on Health Manpower was accepted.

APPROVAL OF COUNCIL MINUTES

The Chairman requested approval of the minutes of the last Council meeting held on June 5-6, 1971. On motion, duly seconded, the minutes of the previous Council Meeting were approved as distributed.

PUBLICATIONS COMMITTEE

Dr. Finnegan, Chairman of the Publication Committee, indicated that at the spring meeting of his Committee, they had advised that a revision of the classified advertising rates be made up to a more generally accepted level and this has been done. He said that his Committee also voted to charge the members for any classified ads which they request to be run in *MISSOURI MEDICINE* and asked if the Council had any serious objection to this.

On motion of Dr. Gunn, duly seconded, it was agreed that this be made a policy of the Publications Committee.

Dr. Gulick brought up the subject of possible advertising in the roster issue of *MISSOURI MEDICINE*, indicating that this is the one issue most physicians keep and that possibly a premium could be put on the advertising in this particular issue. Mr. Carroll stated this could be done, but it might take away from advertising in the other July issue. On motion, duly seconded, the matter of possible advertising in the roster issue of *MISSOURI MEDICINE* was referred to the Publications Committee.

PROJECT REGARDING PHARMACEUTICAL SERVICES IN MISSOURI

Mr. Carroll reported that a letter had been received from the University of Missouri-Kansas City, School

of Pharmacy, seeking support for their project, "Improvement of Pharmaceutical Services in Missouri's Rural Health Care Institutions," to be funded by the Missouri Regional Medical Program. The primary objective of this project is to improve pharmaceutical services to patients in hospitals and nursing homes. The initial phase will be to conduct an evaluation of pharmaceutical services in selected institutions. Following this evaluation, the information will be used as a basis for implementing a planned course of action to accomplish needed improvements. A Board of Advisors will be formed and they have asked the MSMA to appoint someone to serve on this Board.

Mr. McIntyre indicated that he had checked with the State Pharmaceutical Board, which is familiar with this project and, also, the Pharmaceutical Association and they see no objection to it.

On motion, duly seconded, it was agreed that MSMA support this project and that a member be named to their Board of Advisors. Motion carried.

AMA DELEGATES' REPORT

Dr. Neilson reported on the June meeting of the AMA in Atlantic City. Ninety-eight resolutions were considered. The Missouri Delegation introduced Resolution #6, "Restrictions on the Use of Stimulant Drugs." This resolution, along with two other resolutions on drug abuse, was considered by the House and a substitute resolution covering the main points of the three resolutions was passed.

Resolution #98, "Drug Addiction in the Armed Forces," also was introduced by the Missouri Delegation. The reference committee discussed this resolution at length and recommended that the resolves be considered as separate questions. Dr. Neilson said that he felt our resolutions fared quite well.

Dr. Neilson indicated that President Nixon spoke and his speech was widely distributed. He mentioned the advertisements in the metropolitan newspapers which Mr. McIntyre had alluded to earlier.

One of the prime concerns at the AMA meeting was the loss of membership. This loss of membership produces a loss of many dollars in dues a year; to operate all of its programs, AMA may have to dip into reserves.

Dr. Nielson stated that the AMA report on Medical Manpower and Education contains a statement that the U. S. may be headed for a surplus of physicians, while everyone is discussing the lack of physicians. The report also discusses maldistribution of physicians and concludes with a plea for "basic public care"—physicians who give comprehensive personal care, i.e., family physicians.

Dr. Benoit was on the ballot, along with Willard Camalier of Washington, D. C., for the Councilor on Medical Service to replace Charles Ashworth. The Missouri Delegation worked hard on this project. However, Dr. Benoit lost by a small margin.

Dr. Neilson thanked the Delegation, the officers and staff for their hard and diligent work at the AMA Convention.

On motion of Dr. Gunn, duly seconded, the Council accepted the AMA Delegates' Report with commendation.

COMMISSION ON PUBLIC AFFAIRS

Dr. Bowles, Chairman of the Commission on Public Affairs, gave the following report. A meeting of the Commission was held on August 8, 1971 in Columbia.

Several Ad Hoc Committees have been set up under this Commission, namely, Ad Hoc Committee on Aging—Dr. Henry Guhleman, Chairman; Ad Hoc Committee to Develop Public Affairs Conference—Dr. Hubert Ritter, Chairman; Ad Hoc Committee on Emergency Medical Care—Dr. Allen Klippel, Chairman; Ad Hoc Committee on Alcoholism and Drug Abuse—Dr. Joseph Kendis, Chairman.

The Commission discussed the County Society Officers Conference conducted each January. The Commission recommends to the Council that the name of the meeting be changed to Public Affairs Conference and that a format be developed to feature issues of current concern and to involve more young physicians.

Discussion was held by the Commission regarding the orientation conference held in conjunction with the Annual Meeting. The Commission recommends to the Council that this orientation session should also feature issues in medicine and involve new members, interns, residents and medical students. The consensus of opinion was that two such meetings a year—one in St. Louis and one in Kansas City—should be developed. An effort should be made at the Public Affairs Conference to promote the orientation conferences. Dr. Ritter's Ad Hoc Committee also will develop the program for the orientation program.

Dr. Bowles stated that his Commission recommended that Resolution #24, concerning labeling of prescription drugs, be referred to the Legislative Committee for implementation.

The Commission discussed Resolution #32 concerning ambulance licensing and other problems in the field of emergency medical care. Dr. Klippel's ad hoc committee will work in the field concerning emergency medical care facilities, seeking ways to provide better distribution of such facilities.

Dr. Bowles said that the Commission discussed ways to make information about Health Maintenance Organizations and other methods of health care delivery available to the medical profession and to the public. Dr. Miller discussed the current HMO informational conferences being held around the state with MSMA as a cosponsor.

Discussion was held by the Commission regarding the Viet Nam veteran drug problem. The decision was made to contact Congressman Durward Hall and ask him to keep the Commission informed concerning new developments and findings of a Congressional Committee of which he is a member.

The Commission on Public Affairs discussed Resolution #33, concerning stimulant drugs, which was adopted by the MSMA House. Dr. Neilson reported that the AMA had accepted a portion of the Missouri resolution.

Dr. Miller stated that he felt the MSMA should establish an ongoing program in the field of drug abuse which would include cooperation with governmental agencies and others. Dr. Bowles asked what the position of MSMA should be with regard to drug abuse. He indicated that present work in this field in Missouri is being carried out by several organizations. However, he felt this was probably fragmented and largely ineffective and mostly nonphysician directed.

Dr. Bowles indicated that he felt that MSMA should consider the possibility of a physician-directed statewide program and proposed consideration of the development of an MSMA-sponsored task force approach. He suggested setting up some six task forces in the following categories: (1) Administration of justice; (2)

Legislative aspects; (3) Educational aspects—directed toward dissemination of public information and education of physicians in the program; (4) Treatment of drug abuse; (5) Directed towards research in the area; and (6) Addressed to youth and its problems and its sociological implications.

Dr. Bowles stated that Dr. Neilson reported to the Commission concerning recent activities in the field of Environmental Health. The Commission also discussed the increasing problem of venereal disease in the state and a need for an education program in the schools. He said that Dr. Neilson would report to the Council later in the meeting regarding environmental health and also V.D.

Discussion followed regarding the report of the Commission on Public Affairs. Dr. Hansbrough stated that he felt many physicians would not be able to attend the orientation sessions which are proposed for Kansas City and St. Louis and suggested that three such conferences be held. It was recommended by the Council that three orientation conferences be held instead of just the two as recommended by the Commission and that the third probably should be held in Columbia so that the medical students, interns, residents, etc. from the Medical School could attend.

Dr. Mayer stated his interest in the drug abuse problem and the task force concept and indicated that there are many resources that are available throughout the state which have been actively engaged in work in the drug abuse field. He volunteered the cooperation of some of the University of Missouri Medical School personnel who are well versed on this subject.

Dr. Gulick suggested involvement of some of the younger physicians in this drug abuse program.

Dr. Hetlage moved that the Council support the Commission's task force concept on drug abuse. Motion duly seconded and carried.

On motion, duly seconded, the Council approved the report of the Commission on Public Affairs as amended to include three orientation conferences.

AD HOC COMMITTEES ON ENVIRONMENTAL HEALTH AND VD CONTROL

Dr. Neilson reported that he has been in contact with Dr. Donnell, Director of the Division of Health's Bureau of Communicable Diseases, regarding VD problems in this state. Dr. Donnell was gratified with the concern of the MSMA regarding this problem and expressed the desire of the Division of Health to increase VD instruction in medical schools and osteopathic schools, as well as in our public school system and to promote the education of the general public in regard to the mounting severity of the problem. Dr. Donnell has asked for a meeting, and Dr. Neilson stated that he had sent Dr. Donnell names of several physicians he felt should meet and plan a realistic approach. Dr. Neilson stated that, at present, they are working on organizing a meeting of health commissioners, assistant health commissioners, VD controllers and health officers from cities and large towns throughout the state. He said that he felt all financing will be through the Division of Health or through regional health planning agencies.

Dr. Neilson distributed a discussion of "Environmental Health and the Medical Profession" which he helped prepare for the Council on Environmental and Public Health of the AMA.

Dr. Neilson reported that on October 5, the citizens of

Missouri will vote on five constitutional amendments proposed by the 76th General Assembly. Proposition #3 is a \$150 million bond issue designed to assist cities, counties and sewer districts in abating water pollution in the state of Missouri. This bond issue would generate \$600 million in local, state and federal funds for the construction of sewage treatment plans, interceptor sewers and outfall systems over the next four years. It will be paid for by general revenue.

Dr. Neilson indicated that he serves the Water Pollution Board as a member of the Executive Committee working on this proposition and asked the Council to formally support the effort by passing a resolution supporting the Missouri Water Pollution Board for the passage of Proposition #3 and by sending this resolution to the Governor, the Water Pollution Board and the Department of Health of Missouri.

On motion of Dr. Miller, duly seconded, the following resolution was approved by the Council:

WHEREAS, Clean, potable water is necessary for human life, and

WHEREAS, Throughout Missouri, our water supplies are increasingly being polluted by industrial waste, human and animal waste and agricultural fertilizers and poisons, and

WHEREAS, An opportunity is being presented to the people of Missouri to solve this problem by voting "YES" on Proposition #3 on October 5, 1971, in support of a plan to save millions of dollars in assisting counties, cities and metropolitan sewer districts in abating water pollution in the State of Missouri, and

WHEREAS, Contaminated, polluted water, which has been cleansed only partially before being reused in many communities, is a carrier of disease organisms, which may cause a variety of diseases in a user of this water, therefore, be it

Resolved, That the Missouri State Medical Association, on the advice of its Commission on Public Affairs and its Ad Hoc Committee on Environmental Health, hereby supports Proposition #3 to the fullest. Clean water in the state of Missouri is a medical necessity, and passage of Proposition #3 will expedite steps toward bringing about a healthier citizenry in the state.

Dr. Gunn asked if there would be any placards available for physicians' offices asking support of Proposition #3 and Dr. Neilson indicated that he felt he could obtain some.

Dr. Neilson also reported that he has been appointed to the Steering Committee of the Citizens Committee for Conservation. He submitted a resolution for Council consideration to be sent to the Governor, Conservation Commission and Conservation Federation regarding support of the Conservation Commission in its efforts to expand the state's recreational facilities in all respects.

Considerable discussion followed regarding the pros and cons of passing such a resolution. Dr. Peterson stated that he felt property rights of individuals might be involved here.

Dr. Hansbrough stated that he felt Councilors should receive information of this nature prior to the Council meeting so they can study them and make an intelligent decision.

It was moved that this resolution be tabled until the next Council Meeting and that each Council member have a copy of the resolution. Motion seconded and carried.

On motion of Dr. Gunn, duly seconded, the reports on Environmental Health and VD Control were accepted with commendation.

AMA MEMBERSHIP

Mr. Norbeck presented statistics regarding membership in AMA. He indicated that there are 334,028 M.D.'s in the United States, but only 243,438 are prac-

ticing and eligible to be dues-paying members of AMA. Of these 243,000 physicians, a total of 167,272 or 68.7% are now dues-paying members of the AMA. Physicians who are exempt from dues include those in federal service; are inactive due to being 70 years of age or over; are nonfederal interns and residents or doctors experiencing financial hardship due to illness.

COMPREHENSIVE HEALTH PLANNING

Dr. Kelley reported that he was appointed to the Governor's Advisory Council on Comprehensive Health Planning on recommendation of MSMA and that he became Chairman of the Council last spring. He stated that he is the only M.D.-member at the present time who is in the private practice of medicine. He called attention again to the lack of interest and physician involvement in these programs. He indicated that most of the physicians have no idea of what CHP is and what it hopes to do. He strongly urged the Councilors to try to get the physicians involved in their respective areas and exert influence in these programs.

Dr. Kelley spoke to the Council regarding the possibility of the State Medical Association volunteering supplementary funding to the State Advisory Council, so that when the Legislature meets again, he would like to report that MSMA is willing to provide supplementary funds, in addition to what the state can provide. He said they plan to approach other organizations, such as the Hospital Association, Osteopathic Association and, possibly, some insurance companies in this regard and might possibly get enough to guarantee more federal funds to really do a good job. He stated that the money is needed mostly in outstate Missouri.

Dr. Hansbrough brought up the subject of CHP Task Forces in the state. Dr. Kelley stated that there are four which have been active in the state (1) to study accessibility of health services in Missouri by checking throughout the state to determine what the needs really are; (2) to accumulate material on environmental control; (3) one involved in developing a state center for health statistics—not only vital statistics, but information about the distribution of physicians, nurses and all paramedical personnel; (4) Task Force on Emergency Medical Care, particularly ambulance service.

Dr. Kelley reported that they plan to have a meeting this year that will involve not only the funeral directors, but other people who provide ambulance service, helicopter service, etc., and to meet with the American College of Surgeons to work out a basic plan and to try to see what would be the best way to attack this problem of ambulance service.

Dr. Hetlage stated that studies by the CHP should be locally oriented.

The Chairman thanked Dr. Kelley for his report. No Council action was taken at this time on the report.

APPOINTMENT OF BUDGET COMMITTEE

The Chairman then appointed the following members the Council to the Budget Committee for 1972: Drs. Charles A. Gulick, Chairman; Gerald L. Miller, Walter T. Gunn, James C. Cope, Howard McAlhany and E. A. Stricker.

COMMITTEE ON ARRANGEMENTS FOR 1972 ANNUAL SESSION

The Chairman then appointed the following members of the Council to serve on the Committee on Arrange-

ments for the 1972 Annual Session: Drs. Chandler, Martin and Bradshaw. Dr. Chandler will serve as Chairman.

AD HOC COMMITTEE ON CONTINUING MEDICAL EDUCATION

Dr. Paul Young presented the report of the Ad Hoc Committee on Continuing Medical Education. He stated that they are in the process of evaluating the MECO Summer Job Program by contacting the students who took part in the program, which was generally accepted as favorable. Dr. Young stated that the committee recommends that the Council approve continuation of the MECO Program for at least one more year and that the hospitals in Missouri be polled to determine if financing was the major impediment to their participation in the program. If financing was the problem, the committee recommends that outside sources of funding be sought so that the salaries of the students could be funded by some appropriate source with the hospital providing room and board and the educational experience.

After discussion, on motion of Dr. Hetlage, duly seconded, the Council approved continuation of the MECO Program.

Dr. Young then discussed the problem of implementation of its original program approved by the Council regarding the two-phase development of an organized continuing medical education program in the state. One of the problems was the matter of compulsory versus voluntary participation by the physician, and the Committee agreed to attempt to develop a program on a voluntary basis within a reasonable length of time. It was noted that at least ten or 12 state medical associations are currently considering or are implementing programs which require continuing medical education credit for continued membership in their societies. After discussion, on motion of Dr. Miller, duly seconded, it was agreed that the Ad Hoc Committee on Continuing Medical Education develop a voluntary program and that this committee provide a recommended prospectus that details proposed continuing medical education credit program to be presented to the Council for further consideration.

Dr. Young then called attention to three specific items outlined in the report for the development of an organized effort in continuing education, which are as follows:

1. Appoint directors in each Councilor District. This director would have to make a commitment for a period of time, probably three years, as a continuous appointment. He would be appointed by the District Councilor and then would be appointed to the Ad Hoc Committee.
2. Those members that are presently on the Ad Hoc Committee would remain and could be the district directors in their own district.
3. The representatives of the medical schools would remain on the Committee and function as they have in the past.

Dr. Young pointed out that the above three items would give direct input from the Councilor District into the organization and implementation of the plan.

After further discussion, on motion of Dr. Miller, duly seconded, the Council approved the report of the Ad Hoc Committee on Continuing Medical Education.

COMMISSION ON MEDICAL ECONOMICS

In the absence of Dr. Wiegand, Chairman of the Commission on Medical Economics, Third Party Medicine and Governmental Relations, Dr. Peterson gave a

brief report regarding Commission activities. The Commission held a meeting on July 25 in Jefferson City and made the following disposition of resolutions passed by the 1971 House of Delegates and that had been referred by the Council for information, study and recommendations.

Resolution #4—"Third Party Carriers Notification Practices Concerning Fees"—The Commission referred this resolution to the Ad Hoc Blue Cross Committee.

Resolution #13—"Method of Reimbursement to Hospitals by Blue Cross"—The Commission referred this resolution to the Ad Hoc Blue Cross Committee.

Resolution #14—"Subscriber Representation on Blue Shield Boards"—The Commission referred this resolution to the Ad Hoc Blue Shield Committee with the following instructions: "Although the previous Ad Hoc Blue Shield Committee had recommended selection of subscriber members of the Board of Trustees of both plans through County Medical Societies, the House of Delegates rejected this concept, and it is the feeling of the Commission that the new Committee should study this resolution and, hopefully, develop a new effective mechanism for the election of subscriber members of the Boards."

Resolution #20—"Outpatient Medicare Coverage of Patients with Emotional Problems"—The Commission feels that it does not fully understand this resolution and needs more information. Dr. Cowdry and Dr. Wolfgram of St. Louis will be invited to the next meeting to explain the current problems of outpatient psychiatric care under Medicare. The Commission further directed staff to contact other nearby states concerning their policy on this subject.

Dr. Wiegand appointed two ad hoc committees: (1) Ad Hoc Blue Cross Committee, Dr. Victor B. Buhler, Chairman and (2) Ad Hoc Blue Shield Committee, Dr. Charles W. Chastain, Chairman.

The Commission discussed material on RVS that had been obtained from the AMA. Twenty-one state associations have now established RVS's for their organizations.

Dr. Peterson reported on the activities of the Ad Hoc Committee on Negotiation of Professional Fees. He indicated that he and Mr. Noble recently had a meeting in the office of the General Counsel of the AMA to obtain information available from their files on this subject.



Men and Women Compression Hosiery

Support—Sheer &
Surgical Elastic
Pneumatic

From tired legs
to severe
circulatory
disorders

Isle

1121 Grand Ave.
Kansas City, Missouri 64106
816 BA 1 0206

This Ad Hoc Committee hopes to have a mechanism for fee negotiation developed for presentation at the next meeting of the House of Delegates. The Committee is working to have this mechanism established within the framework of MSMA. Dr. Peterson stated that a resolution may be taken to the AMA regarding legislation at a national level which would enable doctors to organize and negotiate as other groups do.

On motion, duly seconded, the report of the Commission on Medical Economics, Third Party Medicine and Governmental Relations was accepted.

Dr. Miller indicated that the Singing Doctors of Greene County will entertain for approximately 30 to 40 minutes at the Saturday evening function for the 1972 Annual Session. He stated that the scientific sessions seem to be shaping up quite well and it is his feeling that our social functions should be of the caliber that will attract physicians and their wives throughout the state. He asked the Council to contact Dr. Chandler, Chairman of the Committee on Arrangements, regarding suggestions they might have for the Saturday night program.

Dr. Miller asked the Council for approval of his suggestion made at the last Council Meeting that a Journalism Award be given at the Annual Session to a deserving individual or individuals and suggested that this be referred to the Ad Hoc Committee on Communications of which Dr. Franklin is Chairman. On motion, duly seconded, the Council approved of this.

Dr. Miller reported to the Council that he had received a letter from Dr. Rikli of the MRMP regarding possible co-sponsorship of a state-wide meeting in 1972 concerning "Hospital Organization for the 70's." This request was precipitated by a seminar which was held in Kansas City in February, 1971 and, apparently, was well received. Discussion followed, and it was suggested by the Council that possibly three or four regional meetings would be better attended than one statewide meeting, if funds are available. It was pointed out that the Osteopathic Association and the Hospital Association

also have been asked to cosponsor such a seminar. On motion of Dr. Martin, duly seconded, it was agreed that the matter of the seminar program be explored further and that this be referred to the Commission on Public Affairs.

Dr. Miller stated that he felt MSMA should be proud of their AMA Delegates and Alternates and that these physicians should be utilized on programs to a much greater extent throughout the state. He said these physicians are very knowledgeable and that the Association should utilize their capabilities.

NEXT COUNCIL MEETING

Mr. McIntyre proposed that the next Council Meeting be held on December 11 and 12, 1971 with the Budget Committee meeting on Friday, December 10. On motion of Dr. Bradshaw, duly seconded, it was agreed that this December 11-12 Council Meeting be held at the Lodge of the Four Seasons at the Lake of the Ozarks.

Mr. McIntyre then proposed that the Public Affairs Conference and Council Meeting be held on January 28, 29 and 30, 1972 at the Ramada Inn in Columbia. The Council would meet on Friday, January 28 and Saturday morning, January 29. The Public Affairs Conference would convene Saturday afternoon and run through Sunday morning, January 30. This proposal was approved.

It was agreed by the Council that the June Council Meeting would be held on June 3 and 4, 1972 at the Ramada Inn in Jefferson City or Columbia.

Dr. Matthews asked the Council to give thought to making the Council meetings, where possible, a one-day meeting. He stated that he was quite certain this would not be possible in all cases, but felt that an effort should be made in this direction. He said that possibly the June meeting might be the one in which this could be tried.

The meeting adjourned and the Chairman called for an executive session.

Missouri State Board of Health Elects Officers

The Missouri State Board of Health elected Julian D. Chastain of Des Peres as its 1971-1972 chairman on October 29. He succeeds J. S. Denslow, D.O., of Kirksville as chairman.

Mr. Chastain has been a member of the Board of Health since 1967, when it was created by Gov. Warren E. Hearnes, and served as vice-chairman of the board last year. He is president of Chastain's Inc., which administrates five professional nursing homes in Missouri and one in Illinois. A nursing home administrator since 1946, he has been a member of the Missouri Nursing Home Advisory Council since 1957. He served three terms as president of the Missouri Nursing Home Association and is a former regional director and vice-president of the American Nursing Home Association.

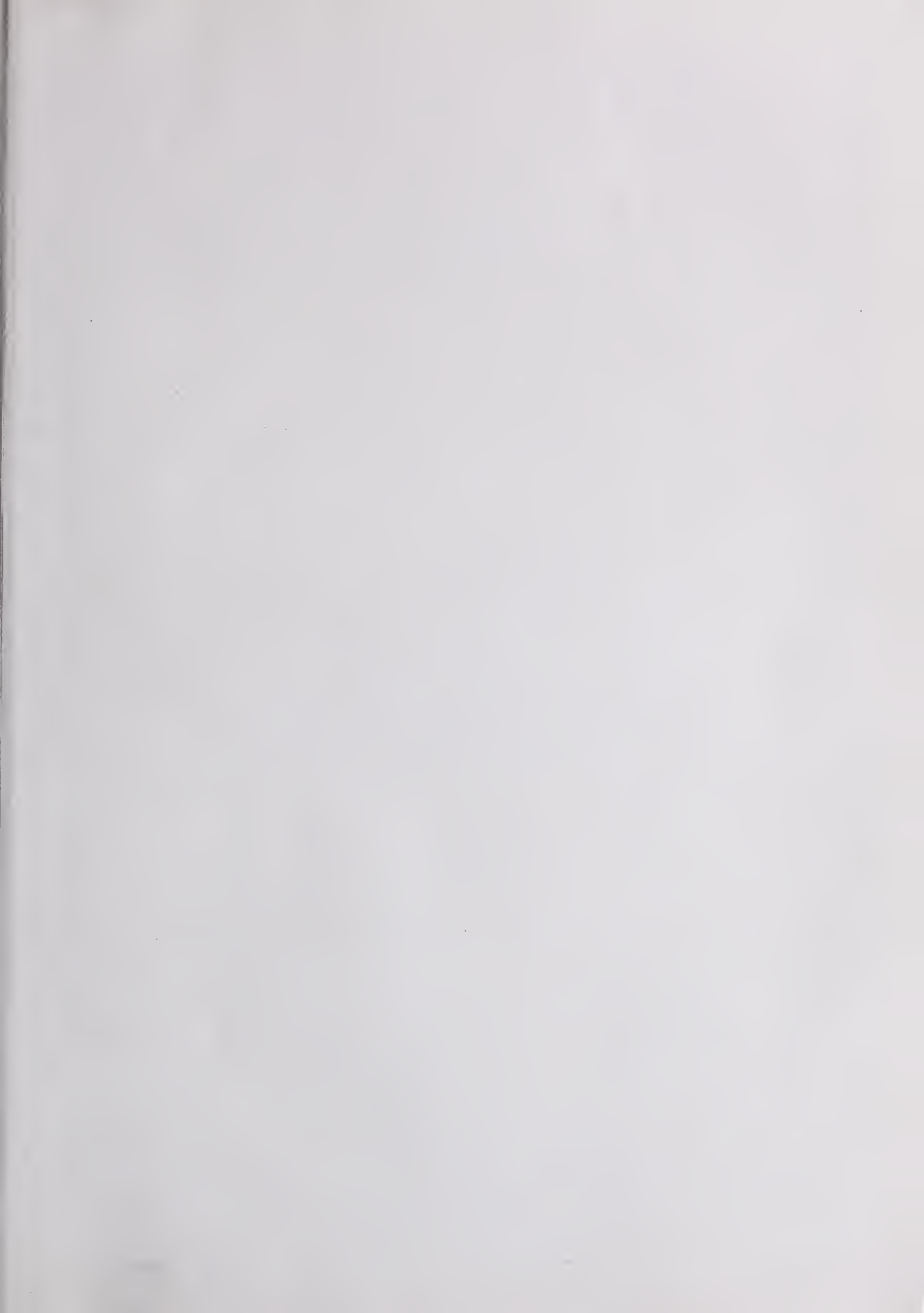
Other 1971-1972 officers elected by the Board of Health are Lester L. Cox of Springfield as

vice-chairman and Ted O. Lloyd of Jefferson City, who was elected to his fifth one-year term as secretary.

Mr. Cox is Chairman of the Board of Directors of the Lester E. Cox Medical Center in Springfield, where he is in the wholesale distributing business. In addition, he is president of Springfield Television Incorporated which operates Station KYTV and is on the Citizen's Bank Board of Directors. Governor Hearnes appointed Mr. Cox to the Board of Health in 1968 to replace his deceased father, Lester E. Cox.

Mr. Lloyd is a charter member of the Board of Health. He serves the Missouri Hospital Association as executive secretary.

Other members of the board are William A. Knight, Jr., M.D., St. Louis; Al Fulenwider, Jackson; William D. Bradshaw, M.D., Clinton; and Doctor Denslow.





Constitution and By-Laws
of the
Missouri State Medical Association

Adopted 1903



1971 Revision

515 EAST HIGH ST.

JEFFERSON CITY, MO. 65101



Constitution

ARTICLE I. NAME OF THE ASSOCIATION

The name and title of this organization shall be the Missouri State Medical Association.

ARTICLE II. PURPOSE

The purpose of this Association is the promotion of the science and art of medicine, the protection of public health, the betterment of the medical profession, and, by uniting with similar organizations in other states and territories of the United States, to form the American Medical Association.

ARTICLE III. MEMBERSHIP

Membership in this Association shall be limited to and include all members in good standing in component societies which hold charters from this Association.

ARTICLE IV. HOUSE OF DELEGATES

The House of Delegates shall be the legislative body of this Association and shall consist of delegates elected by the component societies. It shall elect a Speaker and Vice Speaker from its body. Its Secretary shall be the Secretary of the Missouri State Medical Association.

ARTICLE V. COUNCIL

The Council shall be the executive body of this Association when the House of Delegates is not in session. It shall be the judicial body of the Association when matters are referred to it for decision by the Association, by component societies or by individual members thereof. It shall consist of the President, President-Elect, Immediate Past-President, Secretary, Treasurer and the duly elected Councilors from each Councilor District. Nine members shall constitute a quorum.

ARTICLE VI. SESSIONS AND MEETINGS

Section 1. The Association shall hold an Annual Session at a place fixed by the House of Delegates, the time of which shall be fixed by the Council.

Sec. 2. Special meetings of the Association or of the House of Delegates may be called by a two thirds vote of the Council and shall be called upon a petition signed by members equal in number to one third of the total number of delegates certified for the last Annual Session.

ARTICLE VII. OFFICERS

Section 1. The officers of this Association shall be a President, a President-Elect, three Vice Presidents, a Secretary, a Treasurer, a Speaker and a Vice

Speaker of the House of Delegates and ten Councilors selected as provided for.

Sec. 2. All officers except Councilors shall be elected annually. The terms of Councilors shall be two years. Half of the membership of the Council shall be elected each year. The Secretary and the Treasurer shall be elected by the Council. The delegates present from each Councilor District shall meet prior to the last day of the Annual Session and elect the Councilor from that district. In the event of death, resignation or removal of any Councilor, the Council may appoint a successor to serve until the vacancy is filled at the next Annual Session. All of the officers shall serve until their successors are elected and installed.

ARTICLE VIII. FUNDS, EXPENSES AND BUDGET

Funds shall be raised by a per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates. Funds may also be raised in any other manner approved by the House of Delegates. The Council shall submit an annual budget to the House of Delegates. All resolutions providing for appropriations shall be referred to the Council and all appropriations approved by the Council shall be included in the annual budget.

ARTICLE IX. REFERENDUM

At any General Meeting of the Association it may, by a two thirds vote, order a general referendum upon any question pending before the House of Delegates. The House of Delegates may, by a vote of its members, submit any question to the membership of the Association for its vote. A majority vote of all members of the Association shall determine the question.

ARTICLE X. SEAL

The Association shall have a common seal. The power to change or renew the seal shall rest with the House of Delegates.

ARTICLE XI. AMENDMENTS

The House of Delegates may amend any article of this Constitution by a two thirds vote of the delegates present and voting at any Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session and that it shall have been published twice during the year in the Journal of this Association or sent officially to each component society at least two months prior to the meeting at which final action is to be taken.

By-Laws

CHAPTER I. MEMBERSHIP

Section 1. Members of this Association shall be physicians whose names have been certified by secretaries of component societies to the Secretary of this Association that they are duly elected members of a component society and are legally qualified physicians practicing in Missouri except as otherwise provided. Each member must be of good moral and professional standing, and must not support, nor practice, nor claim to practice any exclusive system of medicine.

Sec. 2. No person who is under sentence of suspension or expulsion from any component society of this Association or whose name has been dropped from its roll of members shall be entitled to any of the rights or benefits of this Association.

Sec. 3. There shall be three classes of members as follow:

Active Members shall be limited to those members of component societies who (1) hold the degree of Doctor of Medicine or Bachelor of Medicine, and (2) if permitted by the by-laws of the component society, members who hold the degree of Doctor of Osteopathy, and (3) are entitled to exercise the rights of active membership in their component societies, as determined by their component societies, subject to the provisions of these By-Laws.

Junior members shall be limited to those members of component societies (1) who are serving a full time internship or residency in a hospital approved by the Council on Medical Education of A.M.A., (2) and they shall continue as junior members for the first three years subsequent to the completion of accredited service.

Honor members shall be limited to Honor members of component societies, which societies have requested that active members who have reached advanced years and have long served the Association and the profession be made Honor members of the Association. They shall enjoy all the privileges of active membership and shall be exempt from the payment of dues.

Sec. 4. **Associate members** shall be limited to persons not provided for in the various classes of membership who are engaged in the pursuit of a medical or allied science, and by action of the component societies, become Associate members of the Association. Associate members shall have the right

to attend scientific sessions and such other privileges as may be extended to them by the House of Delegates. They shall not be eligible to vote and shall be exempt from the payment of dues.

CHAPTER II. GENERAL MEETINGS

Section 1. The General Meetings shall be open to all registered members and guests.

Sec. 2. Any paper read before this Association shall be considered for publication in the Journal if the Author so desires. Such papers may be given publication priority over regularly submitted papers but shall be subject to the same editorial review and selection policies.

Sec. 3. No person in the active practice of medicine in the State of Missouri shall appear on the program of the Association unless he or she is a member of the Missouri State Medical Association or an affiliated association or organization.

CHAPTER III. HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet annually at the time and place of the Annual Session. It shall remain in continuous session on the first day of the Annual Session and complete the work coming before it at that session. It shall meet on the last day of the Annual Session to receive the report of the Nominating Committee and complete unfinished business and the election of officers. No new business shall be introduced at the last session without the unanimous consent of the delegates.

Sec. 2. Each component county society shall be entitled to send each year one delegate or one alternate to the House of Delegates for each fifty full paid members or fraction thereof in the Association on December 31 of the previous year, plus one additional delegate or alternate for each one hundred members or a major fraction thereof; provided, however, that each component society which is composed of two or more county societies shall be entitled to at least one delegate from each of the counties of which it is composed; however, such delegates must reside or practice in the county they represent. Alternate delegates may be elected from the entire membership of the component medical societies.

Sec. 3. Forty delegates shall constitute a quorum of the House of Delegates. All meetings of the

House of Delegates shall be open to members of the Association.

Sec. 4. From among members of the House of Delegates the Speaker shall appoint reference committees to which reports and resolutions, on a majority vote of the House of Delegates, shall be referred as follows:

Reference Committee on Amendments to the Constitution and By-laws.

Reference Committee on Resolutions.

Reference Committee on Miscellaneous Affairs.

Reference Committee on Medical Education and Public Welfare.

Reference Committee on Reports of Officers.

The Speaker may appoint such other reference committees as he may deem necessary, upon approval of the House of Delegates.

The President shall appoint a Committee on Credentials.

Sec. 5. The House of Delegates shall elect delegates and alternates to the House of Delegates of the American Medical Association in accordance with the Constitution and By-laws of that body.

Sec. 6. The House of Delegates shall divide the state into Councilor Districts specifying what counties each district shall include and, when the best interest of the Association and the profession will be promoted thereby, organize in each a district medical society of which all members of the component county societies shall be members.

Sec. 7. The House of Delegates shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates and may be present and participate in the debate on their reports.

Sec. 8. The House of Delegates shall receive and act upon a complete and detailed annual audit of receipts and expenses of the preceding year and a proposed budget for the current calendar year which shall have been prepared by the Council and submitted to the component county societies at least four weeks prior to the Annual Session. These shall be published in the Journal.

Sec. 9. The following shall be the general order of business of the House of Delegates for the first meeting of the session:

1. Call to order by the Speaker.
2. Report of the Committee on Credentials.
3. Roll call.
4. Reading and adoption of minutes.
5. Report of officers.
6. Report of committees.

7. Unfinished business.

8. New business.

The following shall be the general order of business of the House of Delegates for the last meeting of the session:

1. Call to order by the Speaker.
2. Report of the Committee on Credentials.
3. Roll call.
4. Reading and adoption of minutes.
5. Report of the Nominating Committee.
6. Election of officers.
7. Reports of officers.
8. Reports of committees.
9. Unfinished business.
10. New business (see Sec. 1, Chap. III).
11. Installation of officers.
12. President's appointments and installation of members to committees.
13. Selection of the place for the next Annual Session.

At any meeting of the House of Delegates, the order of business may be changed by a two thirds affirmative vote of the members present and voting.

CHAPTER IV. ELECTION OF OFFICERS

Section 1. The President on the first day of the Annual Session shall select a Committee on Nominations consisting of ten delegates, no two of whom shall be from the same Councilor District. The Committee on Nominations shall report the result of its deliberations to the House of Delegates in the form of a ticket containing the name of one member for each of the offices listed in Article VII of the Constitution which are to be filled at that Annual Session excepting the President-Elect who shall be nominated from the floor of the House of Delegates.

Sec. 2. All elections of officers shall be by acclamation unless ballot is called for. A majority of the votes cast shall be necessary to elect except for delegates and alternates to the American Medical Association, who shall be elected as follows:

In case no delegates or alternates for the American Medical Association receive on the first ballot a majority of the votes, the nominees shall be declared elected in the order of the highest number of votes received until the allotted number shall have been chosen. In case of a tie vote for delegate or alternate, the tie shall be determined by lot.

In case no nominee for general offices of the Association (see Article VII, Constitution) receives a majority of the votes on the first ballot, the nominee receiving the lowest number of votes shall be dropped and a new ballot taken. This procedure shall be continued until one of the nominees receives

a majority of all the votes cast, when he shall be declared elected.

Sec. 3. Nothing in this chapter shall be construed to prevent additional nominations being made from the floor by members of the House of Delegates.

Sec. 4. Delegates present at the Annual Session from Councilor Districts whose Councilors' terms expire shall hold meetings on or before the morning of the last day of the Annual Session and elect a Councilor for their District for a term of two years. The name of the elected Councilor shall be given on a prescribed form to the Secretary for presentation to the House of Delegates. Each candidate for Councilor must reside or practice in the district for which he is elected.

Sec. 5. The Speaker and Vice Speaker shall not serve more than three consecutive terms.

Sec. 6. The Speaker shall appoint a parliamentarian to serve as such during the session of the House of Delegates at each Annual Session and upon whom the Speaker may call before deciding points of order or procedure.

CHAPTER V. DUTIES OF OFFICERS

Section 1. The **President**, or his designated representative, shall preside at all scientific sessions of the Association. He shall preside at the House of Delegates in the absence of the Speaker or Vice Speaker and until their successors are elected. He shall appoint all committees not otherwise provided for. He shall deliver an annual address at such time as may be arranged and shall perform such other duties as custom or parliamentary usage requires. He shall be the real head of the profession of the state and assist the Councilors in building up the county societies and in making their work more practical and useful.

Sec. 2. The **President** and the **President-Elect** shall be members of the Council and shall attend all meetings of the Council. Should the office of President-Elect become vacant through death or otherwise the Council may fill the vacancy until the next Annual Session of the Association.

Sec. 3. The **Vice Presidents** shall assist the President in the discharge of his duties. In the event of the death, resignation or removal of the President the Council shall select one of the Vice Presidents to serve the unexpired term.

Sec. 4. The **Treasurer** shall give bond in the sum of \$20,000. He shall demand and receive all funds due the Association, together with bequests and donations. He shall pay money out of the treasury only on a written order of the President, countersigned by the Secretary; he shall subject his accounts to

such examination as the House of Delegates may order, and he shall annually render an account of his actions and of the state of the funds in his hands.

Sec. 5. The **Secretary** shall attend the General Meetings of the Association and the meetings of the House of Delegates, and shall keep minutes of their respective proceedings in separate record books. He shall be Secretary of the Council and shall keep a record of its proceedings. He shall be custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the Annual Session. He shall, with the cooperation of the secretaries of the component societies, keep a card index register of all the legal practitioners of the state by counties, noting on each his status in relation to his county society, and shall transmit a copy of this list to the American Medical Association, transmitting to its Secretary each month a report containing the names of new members and the names of those dropped from the membership roster during the preceding month. He shall conduct the official correspondence, notifying members of meetings, officers of their election and committees of their appointment and duties. He shall employ such assistants as may be ordered by the Council and shall make an annual report to the House of Delegates. He shall supply all component societies with the necessary blanks for making their reports and shall collect from them the regular per capita dues and assessments and turn the same over to the Treasurer. The amount of his salary shall be fixed by the Council.

CHAPTER VI. COUNCIL

Section 1. The Council shall meet during the Annual Session at such times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. It shall meet on the last day of the Annual Session to organize. The Council shall elect a Chairman and a Vice Chairman for a term of one year. The Chairman may be re-elected to serve not more than four consecutive terms of one year each. The Council shall, through its Chairman, make an annual report to the House of Delegates.

Sec. 2. Each Councilor shall be organizer, peace-maker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exists, for inquiring into the condition of the profession, and to keep in touch with the activities of and

to aid in the betterment of the component societies of his district. He shall make reports of his work and the condition of the profession of each county in his district to the Council. The necessary traveling expenses incurred by each Councilor in the line of duties herein imposed may be allowed on a proper itemized statement submitted monthly and within the current year, but this shall not include his expense in attending the Annual Session of the Association. No Councilor shall be eligible for the position of Delegate to the House of Delegates during his term of office as Councilor, nor shall he vote in the House of Delegates.

Sec. 3. The Council shall be the executive body of the House of Delegates and between sessions shall exercise the power conferred on the House of Delegates by the Constitution and By-laws.

Sec. 4. The District Councilor together with two members of component societies within the Council District, selected by the Councilor, shall serve as a Board to hear and by a majority vote adjudicate any questions involving the right and standing of members, either in relation to other members or to component societies or to the Association, and all matters of discipline affecting the conduct of members of component societies, or other matters.

The Council shall be the appellate Board of Censors of the Association. It shall hear and adjudicate all matters on appeal from the decision of the Councilor Board; it shall hear and adjudicate matters of an ethical nature brought before the House of Delegates or the general meeting which shall be referred to the Council without discussion. On original decision or appellate determination, its decision shall be final unless appealed to the then convened meeting or the next meeting of the House of Delegates.

Sec. 5. Charters shall be issued to county societies only on approval of the Council, and shall be signed by the President and Secretary of this Association. Upon the recommendation of the Council, the House of Delegates may revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-laws.

Sec. 6. In sparsely settled sections the Council shall have authority to organize the physicians of two or more counties into societies, to be suitably designed so as to distinguish them from district societies, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

Sec. 7. The Council shall provide for and supervise the issuance of all publications of the Association

including proceedings, transactions and memoirs, and shall have authority to appoint an Editor and such assistants as it deems necessary. It shall prescribe the methods of accounting and through a committee of three of its members, to be known as a Committee on Auditing and Appropriations, shall audit all accounts of this Association. The Council shall adopt an annual budget providing for the necessary expenses of the Association for the following calendar year. This budget shall be prepared and presented for consideration in the last quarter of each year by the Committee on Auditing and Appropriations. A complete and detailed report shall be submitted to the component county medical societies as provided in Section 8, Chapter III. The Council shall submit an annual report of the House of Delegates which shall specify the character and cost of the publications of the Association, the amount and character of all its property, and shall provide full information concerning the management of all affairs of the Association which the Council is charged to administer.

Sec. 8. The Council shall appoint at least six months before the Annual Session, a committee consisting of three of its members to be known as the Committee on Arrangements for the Annual Session. On recommendation of the Committee, the Council shall appoint a general chairman of a Local Committee on Arrangements, who shall be a member of the component society of the county in which the Annual Session is to be held, and who shall appoint and organize from the members of this county society the personnel of the Local Committee on Arrangements. The Local Committee on Arrangements shall provide suitable meeting places and shall have general charge of all local arrangements subject to the approval of the Committee on Arrangements for the Annual Session. All receipts and disbursements related to the Annual Session shall be handled by the Committee on Arrangements on recommendations of the Committee on Budget and Appropriations.

Sec. 9. The Council shall by appointment fill any vacancy in office not otherwise provided for which may occur during the interval between Annual Sessions of the House of Delegates; the appointee shall serve until his successor has been elected and has qualified.

Sec. 10. The salaries of all employees of the Association shall be fixed by the Council.

Sec. 11. The Council shall provide such headquarters for the Association as may be required to conduct its business properly.

Sec. 12. The Council shall be empowered to elect an Executive Secretary and Assistant Executive Sec-

retary and such other personnel as may be necessary, who need not be members of the Missouri State Medical Association, each of whom shall perform such duties as the Council may designate and receive such salary and serve for such periods and under such conditions as the Council may determine.

CHAPTER VII. COMMITTEES AND COMMISSIONS

Section 1. Standing Committees of the Missouri State Medical Association, the chairman of which shall be appointed by the Association President unless otherwise provided in these By-Laws, will be as follows:

Executive Committee.

Committee on Constitution and By-Laws.

Committee on Publication.

Committee on Legislative Affairs.

Committee on Planning.

Committee on Voluntary Health Agencies.

The **Executive Committee** shall consist of the Association President, President-Elect, Secretary, Treasurer, Council Chairman and Council Vice-Chairman. The President of the Association shall be Chairman of the Executive Committee. The Executive Committee shall plan and execute such work as may be necessary for the welfare of the Association and the conduct of the Executive Secretary's Office between meetings of the Council, but shall be responsible at all times to the Council.

The Committee on **Constitution and By-Laws** shall consist of five members named by the President and shall propose such amendments to the Constitution and By-Laws as are deemed wise and expedient, and bring before the House of Delegates such amendments as it or other members of the Association may present for consideration. The President shall appoint one member for one year, two members for two years and two members for three years. As the term of each expires, his successor shall be appointed for a term of three years.

The Committee on **Publication** shall consist of five members and be appointed annually by the Council and shall be responsible for general publication and distribution policies of the Journal. The Editor of the Journal shall be designated by the Council and also shall serve as Chairman of the Committee on Publication. The Editor shall be empowered to nominate an Editorial Board, subject to approval by the Council. The members of the Editorial Board will assist the Editor in soliciting, preparing and reviewing material for publication in the Journal.

The Committee on **Legislative Affairs** shall consist of five members of the Association, appointed

annually by the President. The Committee shall consider legislative proposals affecting health problems of the people of the state and the practice of medicine and shall make recommendations to the Council and the House of Delegates as well as directing staff activities in such matters.

The **Planning Committee** shall consist of ten members to be appointed by the President. Two members shall be appointed for one year, two for two years, two for three years, two for four years and two for five years. As the term of each expires, his successor shall be appointed for a term of five years. In making such appointments, the President shall be governed by experience of the member, the size of his medical society and his geographical area, so as to have a representative committee. Age of the members shall be considered to the end that one-third to one-half of the committee shall be of an age group that should contemplate ten to twenty years more of active practice.

The Committee on **Voluntary Health Agencies** shall consist of five members of the Association appointed by the President. Two members shall be appointed for three years, two members for two years and one member for one year. As the term of each expires, his successor shall be appointed for a term of three years. The Committee on Voluntary Health Agencies shall provide liaison and work with all voluntary health organizations.

Section 2. Standing Commissions of the Missouri State Medical Association, who shall be responsible to the Council and whose chairman shall be appointed by the Association President, will be as follows:

Commission on Public Affairs.

Commission on Medical Economics, Third Party and Governmental Relations.

Commission on Continuing Education and Health Manpower.

Commission on Medical-Legal Affairs.

Commission on Interspecialty Medicine.

Subsection a. The standing Commissions, unless otherwise provided in these By-Laws, shall consist of fifteen members serving three-year terms and the terms will be staggered so that the President will appoint five members of each Commission each year. Initially, the President will appoint five members to one-year terms, five members to two-year terms and five members to three-year terms and no member shall serve more than two consecutive terms.

Subsection b. The Chairman of each Commission may appoint Ad Hoc Committees to carry out the Commission's programs. These Ad Hoc Committees may include any Missouri State Medical Association member.

Subsection c. The Chairman of the Council shall

appoint each year an appropriate Councilor to serve as advisor to each respective Commission.

The Commission on **Public Affairs** shall plan and execute programs designed to enhance the relationship between the public and the medical profession. The Commission shall have responsibility in the fields of industrial health, environmental health, medicine and religion, trauma, disaster medical care and national defense and other public matters.

The Commission on **Medical Economics. Third Party Medicine and Governmental Relations** shall keep close liaison and work with peer and utilization review mechanisms, insurance intermediaries and governmental agencies.

The Commission on **Continuing Education and Health Manpower** shall determine the character and scope of the scientific proceedings of the Association for each annual session as well as to make all arrangements for such annual sessions, subject to the instructions of the House of Delegates. The Commission shall also be responsible for the entire continuing education program of the Association, shall have all matters pertaining to hospitals referred to it, shall carry on all programs in the recruitment of health manpower in professional as well as in allied health fields and shall be responsible for programs in the rural health field.

The Commission on **Medical-Legal Affairs** shall investigate and study medical-legal matters affecting the practice of medicine, make recommendations to the Council and House of Delegates and also make certain that all Association members are kept informed of important developments in this field. The Commission also may work with similar groups formed by the State Bar Association on matters of joint interest and concern as well as with governmental and insurance agencies in this field.

The Commission on **Interspecialty Medicine** shall be composed of one representative of each statewide specialty group as recognized by the Association Council. The President of the Missouri State Medical Association shall appoint annually to the Commission a representative from each of the authorized groups as submitted to him by the specialty organization. In the event that such a nominee is not submitted to him by an organization, the Association President may designate a member of that specialty group to serve on the Commission.

The Commission shall be charged with the responsibility of reviewing organization problems with respect to scientific programs, socio-economic and legislative matters that affect their particular specialties; in addition the Commission shall have the responsibility for programs and activities in fields relating to disease and health services involving the

citizens of our state and such other matters as the Council shall direct. Also, the Commission shall provide close liaison between the various specialty organizations and the Missouri State Medical Association.

Section 3. Fifty percent of a Committee or a Commission should be present at an official meeting to constitute a quorum.

Section 4. Special committees may be appointed by the President or the Council as circumstances may demand.

CHAPTER VIII. DUES AND ASSESSMENTS

Section 1. (a) The annual dues of this Association shall be \$65.00, which shall be applicable to each active member of the Association beginning in 1970 and shall be levied per capita on the active members of the component societies; the per capita levy for junior members shall be one half of the per capita levy for active members; honor and associate members shall not be required to pay dues. Dues shall be payable on January 1 of the year for which they are levied.

(b) An assessment of \$10.00 per year on each active member of the Association and \$5.00 per year on each junior member shall be applicable for a three-year period beginning in 1972. The assessment shall be payable with the dues of the Association, and the monies collected therefrom shall be remitted to the Missouri State Medical Foundation.

Sec. 2. Three dollars of the annual dues shall be credited to the account of the Journal for each member's annual subscription. The remainder of the amount shall be credited to the general fund of the Association.

Sec. 3. The House of Delegates may, when in its judgment the best interest of the Association demands, recommend an assessment on each active member. Such assessment shall be levied only by consent of two thirds of the members of the House of Delegates present and voting. Funds obtained from such special assessments shall be allocated only for the purposes for which such assessment is levied and in accordance with substantiating budgets. Unexpended balances from such assessments must be reported to the House of Delegates for re-allocation.

Sec. 4. The secretary of each component society shall cause to be collected and remitted to the Treasurer of this Association the per capita levies. Any member whose name has not been reported for enrollment and whose dues have not been remitted to the Treasurer of this Association on or before March 1 shall stand suspended until his name is properly reported and his dues for the current year are paid. On December 31 of each year, members delinquent

in payment of dues, and assessment if such has been made, or any part thereof shall, ipso facto, forfeit their memberships. No suspended member shall be eligible to register at an annual session.

CHAPTER IX. RULES OF CONDUCT

The ethical principles governing the members of the American Medical Association shall govern members of this Association.

CHAPTER X. RULES OF ORDER

The deliberations of this Association shall be conducted in accordance with parliamentary usage as defined in *Robert's Rules of Order*.

CHAPTER XI. COUNTY SOCIETIES

Section 1. All county societies now in affiliation with the State Association or those that may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and By-laws shall, upon application to the Council, receive charters from this Association, provided that their Constitutions and By-laws shall have been submitted to the Council and received its approval.

Sec. 2. Only one component medical society shall be chartered in each county.

Sec. 3. Each county society shall judge of the qualifications of its members, subject to review and final decision by the Council of the State Association. Every reputable and legally qualified physician who does not practice, nor profess to practice sectarian medicine, and who resides or practices in the same county, who shall apply for membership on the prescribed form and subscribe for the Journal and pay the annual dues and assessments for the current year, shall be eligible for election to membership.

A member of a component society whose license has been revoked shall be dropped from membership automatically as of the date of revocation. The Council of the State Association shall have final authority to expel a member should a component county society fail to do so after being so requested by the Council.

The Council may upon request of a component society remit the state dues and assessment of a member who has become totally and permanently incapacitated through mental or physical disability and has been a member in good standing during the three consecutive years immediately preceding his disability; provided, that the component society shall remit the county society dues of such member.

The Council may, upon request of a component society, remit the state dues and assessments of a deserving member, found to fall within what is clas-

sified as a hardship case, during the period of said hardship until such time as the dues again become payable; provided that the component society shall remit the county society dues of such member.

The Council may, upon the request of a component society, waive the dues of any member in good standing for such a period as the member is serving in the Armed Forces of the United States of America, or similar service with any of the allies of the United States, and for six months thereafter.

A physician living near a county line may hold his membership in that county most convenient for him to attend, on permission of the component society in whose jurisdiction he resides.

Sec. 4. Any physician who may feel aggrieved by the action of the society of his county in suspending or expelling him shall have the right to appeal to the Council whose decision shall be final. A county society shall at all times be permitted to appeal or refer questions involving membership to the Council of the State Association for final determination.

Sec. 5. In hearing appeals the Council may admit oral or written evidence or both as in its judgment will most fairly present the facts.

Sec. 6. When a member in good standing in a component county society moves to another county in this state, he shall be given a written certificate of these facts by the secretary of his society, without cost, for transmission to the secretary of the society in the county to which he moves. Pending his acceptance or rejection by the society in the county to which he moves such member shall be considered to be in good standing in the county society from which he was certified and in the State Association to the end of the period for which his dues have been paid.

A member of a component society who moves to and engages in the practice of medicine at a location in another county in which there is a component society shall forfeit his membership in this Association and the Secretary shall remove his name from the roster of members of the Missouri State Medical Association unless within one year after such change of residence he becomes a member of the component society in the county to which he has moved.

Sec. 7. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county. Systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it includes every eligible physician in the county.

Sec. 8. At some meeting in advance of the Annual Session of this Association, each component county society shall elect one or more delegates and an equal number of alternates therefor to represent it in the House of Delegates of this Association, in ac-

cordance with Chapter III, Section 2 of these By-laws. The secretary of each county society shall send a list of such delegates and alternates to the Secretary of this Association at least sixty days before the Annual Session. Representation in the House of Delegates shall be contingent on compliance with the foregoing provisions.

Sec. 9. The secretary of each county society shall keep a roster of its members and, if practicable, a list of non-affiliated physicians, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary by the Council. He shall send a copy of the program of each meeting to his district councilor and to the Secretary of the State Association.

Sec. 10. Any county component society, in a manner approved by the State Association, or the State Association with the consent of the county society or societies affected, may undertake, organize and put into effect plans for the medical care of indigent per-

sons or indigent groups, and low income groups, by agreements with physicians, public officials or others and by the use of contributions, cooperative funds or other means; provided, however, that a free choice of the available and participating physicians in that territory shall be allowed to the patient and that all relationships, legal or otherwise, between the physician and the patient shall be and remain as though it were strictly an individual employment.

CHAPTER XII. AMENDMENTS

Section 1. These By-laws may be amended at any Annual Session by a two thirds vote of the delegates present and voting at that session, if the proposed amendment has been properly submitted to the House of Delegates and has laid on the table for one day.

Sec. 2. Upon the adoption of this Constitution and these By-laws all previous constitutions and by-laws are thereby repealed.



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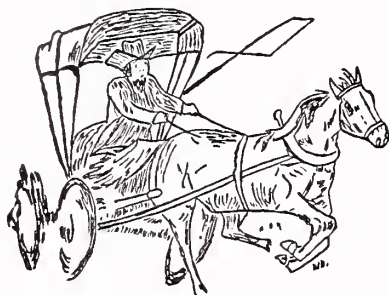
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Missouri Medicine in Review



FORTY YEARS AGO

Dr. Harrison S. Martland, Newark, medical examiner of Essex County, reviewed cases of radium dial painters in *The American Journal of Cancer*. He showed that cancer occurs in radioactive persons, the disease developing from the constant bombardment on the victim's tissues by the alpha particles emanating from the radium which dial painters absorb and which is stored in their bones. For this reason, he strongly recommended proper medical supervision of the use of radium and the roentgen ray for purposes of treatment of disease and government control over industries and occupations in which exposure to radioactive substances takes place.

Dr. Otto H. Warburg of Berlin, Germany, scientist and cancer specialist, was awarded the 1931 Nobel Prize in Medicine on October 29 for his studies of the respiratory organs. Last year's Nobel Prize in Medicine was awarded to Dr. Karl Landsteiner of New York City.

Dr. Guido Holzke of Vienna, credited as the discoverer of the therapeutic value of roentgen rays, died on October 31, a martyr to his roentgen ray experiments. Overexposure to the rays caused cancer. First a finger was amputated and then an arm in a vain attempt to save his life. He was 60 years old.

TWENTY-FIVE YEARS AGO

The Randolph-Monroe County Medical Society met in Moberly on November 14 with 13 members present. Mr. Raymond McIntyre, Field Secretary of the Missouri State Medical Association, explained a plan for reactivating county

medical societies by hyphenating several into one. Dr. D. D. Stuart, Brunswick, and Dr. G. W. Hawkins, Salisbury, representing the Chariton County Medical Society, officially voted to hyphenate with Randolph-Monroe County Medical Society. The Randolph-Monroe County Medical Society unanimously voted to accept the hyphenation.

J. Areher O'Reilly, M.D., St. Louis, has been named chairman of the board of the Missouri Society for Crippled Children.—Frank R. Bradley, M.D., St. Louis, has been installed as president of the American College of Hospital Administrators.

The Saline County Medical Society met at the Country Club in Marshall on October 22. An excellent dinner preceded the scientific program. M. Pinson Neal, M.D., Columbia, spoke on the subject, "Diagnoses Commonly Missed in the General Practice of Medicine." An interesting discussion followed this practical presentation.

TEN YEARS AGO

J. H. Summers, M.D., Lebanon, talked at the 39th Annual Meeting of the Missouri Hospital Association on October 11 in St. Louis. He said, "I shudder to think what would happen to our present high standards of hospital-medical care if the federal government, even though acting initially with the purest of motives, were to dominate our health education system. With respect to enlisting greater understanding and support of your medical staff, I would suggest that, here again, improved communications could work wonders. For instance, does your hospital have an active liaison committee that keeps both the medical staff and hospital administrative group informed of each other's plans and thinking? Better still, does your hospital have medical staff representation on its Board of Trustees or advisory boards?"

"Will Rogers used to say, 'I've never met a man I didn't like.' So often, it seems to me, the disunion of interests between some hospital policymakers and doctors would be replaced by mutual respect and harmony if only they could get to know each other better. Certainly, the experience of those hospitals which have instituted better means of communication between the two groups has borne out this fact."

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antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

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